UNIVERSAL DOCUMENTATION SYSTEM

INTERNATIONAL SPACE STATION ORBITAL VOL-I

PRD/PSP/OR/OD

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1000 - ADMINISTRATIVE

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	575435	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	02/16/04
		INITIAL DATE:	
ITEM NUMBER:	T1	DATE LAST CHANGED:	02/16/04
SECTION:	1000	TIME LAST CHANGED:	15:09:46

REQUESTER: JSC
TEST CODE: INFO

1. DESCRIPTION: PREFACE

The UDS document 501-97, Volume2, Section 2 "PRD/OR Preparation Instructions" is the prime guideline for administrative Procedures in preparation of the Station Operation CORE PRD except for the following items.

1. Section 1052 - Item Number Definition: The Item Number system employed herein constitutes a deviation from the UDS Item Numbering recommendations. These deviations are explained in the 1052 section.

2. Section 1051 - Test Codes: Reference Section 1051 for Test Code rationale.

ADMINISTRATIVE INFORMATION

An agency support requirement documented herein requires a response from the specified supporting agency(s). Requesting and supporting agencies are identified by item number coding found in block 8 of each page. Requirements are in Sections 2000 - 6000. Agency response should follow guidelines prescribed in Volume II of the Universal Documentation System (UDS), Document 501-97, published by the Range Commanders Council Documentation Group. Each center/agency submits it's responses to station requirements through the R&R Manager at that center/agency for coordination.

For NASA organizations - George D. Phillips
EX-NAM
NASA/AF Management Office
Kennedy Space Center, FL 32899

For all others - Secretariat
Range Commanders Council
Attn: STEWS - SA - R

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1000 - ADMINISTRATIVE

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575435
ITEM NUMBER: T1

White Sands Missile Range, NM 88002

[PRD] DATABASE RECORD: 575436 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/16/04
INITIAL DATE:
ITEM NUMBER: T2 DATE LAST CHANGED: 02/16/04
SECTION: 1000 TIME LAST CHANGED: 15:37:38

REQUESTER: JSC
TEST CODE: INFO

1. DESCRIPTION: AUTOMATED SUPPORT REQUIREMENTS SYSTEM

The Automated Support Requirements System (ASRS) is an intercenter/ agency electronic data processing and transmission system for the communication of support requirements/support responses between NASA and DOD centers/agencies for the Space Transportation System and Cargo element.

The electronic Transmission feature of the system permits immediate dissemination of requirements and support information to all users. The data base storage feature provides display of this information in user familiar formats.

DATA BASE - The ASRS Data base is a Client Server Application located at KSC. The data base consists of a series of logically independent data bases which include:

1) Launch & Landing Data Base - Shuttle (LLS)
2) Launch & Landing Data Base - Payload (LLP)
3) Launch & Landing Data Base - Station Payload (SSL)
4) Flight Data Base - Shuttle (FLT-I)
5) Flight Data Base - Payload (FLT-II)
6) Space Station Data Base - Core (ISS VOL-I)
7) Space Station Data Base - Payload (ISS II)

Each individual data base is managed by the appropriate SRS Data Base Manager who has total responsibility for management of the data base. Each data base contains only the support requirements and support responses associated with that operating element.

CONTINUED

[PRD] DATABASE RECORD: 575436
ITEM NUMBER: T2

The ASRS should greatly reduce the need for distribution of hardcopies of requirements documents. Every center/organization may now retrieve the requirements of interest and print/distribute them at each center/ organization.

[PRD] DATABASE RECORD: 575437 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/16/04
INITIAL DATE:
ITEM NUMBER: T3 DATE LAST CHANGED: 02/16/04
SECTION: 1000 TIME LAST CHANGED: 15:48:42

REQUESTER: JSC
TEST CODE: INFO

1. DESCRIPTION: DEFINITION OF STATION SUPPORT REQUEST (SSR) NUMBER

The subrequester field is used to reference the Routine Support Requirement/Station Support Requirement (RSR/SSR) number; i.e.,

SUBREQUESTER	DESCRIPTION
SXX-YY-Z	S = STATION XX = YEAR OF CHANGE YY = MONTH OF CHANGE Z = SEQUENCE NUMBER

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1031 - INDEX

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1050 - ABBREVIATIONS/ACRONYMS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533564 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T1 DATE LAST CHANGED: 02/12/04
SECTION: 1050 TIME LAST CHANGED: 15:25:29

REQUESTER: JSC
TEST CODE: INFO
TRACKING NO. S01-02-2 S01-05-5 S609-1 S804-1 S905-1
S911-1

1. DESCRIPTION: ACRONYMS AND ABBREVIATIONS

ACBPS	Assembly Contingency Base band Signal Processor
ACS	Assembly Contingency Subsystem
AIS	Automated Information System
ALTEC	ASI Spaziole Italiana (Italian Space Agency)
APS	Automated Payload Switch
ARC	Ames Research Center
ASI	Agenzia Spaziole Italiana (Italian Space Agency)
ASRS	Automated Support Requirements System
ATV	Automated Transfer Vehicle
C&C	Command and Control
CCSDS	Consultative Committee for Space Data Systems
CIR	Committed Information Rate
COR	Communications Outage Recorder
CSA	Canadian Space Agency
C&T	Communications and Tracking
CVT	Current Value Table
DFRC	Dryden Flight Research Center
DoD	Department of Defense
DSMC	Data Service Management Center
ESA	European Space Agency
ESR	Engineering Support Room
ESTL	Electronic Systems Test Laboratory
EVA	Extravehicular Activity
FDF	Flight Dynamics Facility
FEL	First Element Launch
GCMR	Ground Configuration Message Request
GIANT	Globally Interconnected Advance Networked Telepresence
GN	Ground Network
GRC	John Glenn Research Center at Lewis Field
GSE	Ground Support Equipment

CONTINUED

[PRD] DATABASE RECORD: 533564
ITEM NUMBER: T1

GSFC	Goddard Space Flight Center
HOSC	Huntsville Operations Support Center
HSG	Houston Support Group
HTV	H-II Transfer Vehicle
H&S	Health and Status
ICD	Interface Control Document
IOS	Instructor Operator Station
IP	International Partner Internet Protocol
IPS	Integrated Planning System
ISO	International Station Orbital
ISS	International Space Station
JAXA	Japan Aeropace Exploration Agency
JSC	Johnson Space Center
Kbps	Kilobits per second
KSA	Ku-band Single Access
KSAF	Ku-band Single Access Forward
KSAR	Ku-band Single Access Return
KSC	Kennedy Space Center
LaRC	Langley Research Center
LM	Lockheed Martin
LOR	Line Outage Recorder
Mbps	Megabits per second
MCC-H	Mission Control Center - Houston
MCC-M	Mission Control Center - Moscow
MDM	Multiplexer Demultiplexer
MEIT	Multi-Element Integration Test
MMT	Mission Management Team
MSFC	Marshall Space Flight Center
NACAIT	Network and Communications Analysis and Integration Team
NASA	National Aeronautics and Space Administration
NCC	Network Control Center
NCCDS	Network Control Center Data System
NCHD	Non-Critical Highly Desirable
NIB	Non-Interference Basis
NIC	Network Integration Center
NISN	NASA Integrated Services Network
NLT	No Later Than

CONTINUED

[PRD] DATABASE RECORD: 533564
ITEM NUMBER: T1

NMI	NASA Management Instruction
NPRD	Network Program Requirements Document
NTSC	National Television Standards Committee
OCA	Orbiter Communications Adapter
OCMS	Operations Control Mission Software
OND	Operational Need Date
OSF	Office of Space Flight
P/B	Playback
PDSS	Payload Data Services System
PEHG	Payload Ethernet Hub/Gateway
PEP	Payload Executive Processor
PES	Payload Executive Software
PID	Program Introduction Document
PN	Pseudorandom Noise
POIC	Payload Operations Integration Center
PPS	Payload Planning System
PTC	Payload Training Capability
RAPS	Remote Area for Payload Support
RMPSR	Remote Multi-Purpose Support Room
RPI	Remote Principal Investigator
RS	Russian Segment
RSA	Russian Space Agency
RT	Realtime
SDIL	Software Development Integration Laboratory
SGS	Space to Ground Subsystem
SM	Service Module
SN	Space Network
SRS	Support Requirements System
SSA	S-band Single Access
SSAF	S-band Single Access Forward
SSAR	S-band Single Access Return
SSCC	Space Station Control Center
SSP	Space Station Program
SSPF	Space Station Processing Facility
SSTF	Space Station Training Facility
STS	Space Transportation System
TBD	To Be Determined
TBS	To Be Supplied
TCP	Transmission Control Protocol

CONTINUED

[PRD] DATABASE RECORD: 533564
ITEM NUMBER: T1

TDRS	Tracking and Data Relay Satellite
TDRSS	Tracking and Data Relay Satellite System
TOC	TDRSS Operations Control Center
UDP	User Datagram Protocol
UDS	Universal Documentation System
UF	Utilization Flight
UPD	User Performance Data
USGS	United States Ground Segment
USOS	United States On-Orbit Segment
VHF	Very High Frequency
VoIP	Voice over Internet Protocol
WAN	Wide Area Network
WFF	Wallops Flight Facility
WSC	White Sands Complex
ZOE	Zone of Exclusion

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1052 - SPECIAL CODE DEFINITION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533731 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 12/15/99
INITIAL DATE: 08/23/96
ITEM NUMBER: T1 DATE LAST CHANGED: 07/03/02
SECTION: 1052 TIME LAST CHANGED: 08:10:43

REQUESTER: JSC
TEST CODE: INFO
TRACKING NO. S609-1 S912-1

1. DESCRIPTION: AGENCY DESIGNATORS

WSMR	A	- White Sands Missile Range
GRC	B	- Glenn Research Center
NWS	C	- National Weather Service
DOD	D	- Department of Defense
	E	- 45 SPW (Space Wing)Formerly ESMC
AFFTC	F	- Air Force Flight Test Center
GSFC	G	- Goddard Space Flight Center
MSFC	H	- Marshall Space Flight Center
LaRC	I	- Langley Research Center
JPL	J	- Jet Propulsion Laboratory
KSC	K	- Kennedy Space Center
NWC	L	- Naval Weapons Center
ARC	M	- Ames Research Center
NAWC	N	- Naval Air Warfare Center Weapons Division
NOMTS	O	- Naval Ordinance Missile Test Station
MSD	P	- Munitions Systems Division
WFF	Q	- Wallops Flight Facility
ERDC	R	- Electronic Research and Development Command
AFSCN	S	- Air Force Satellite Control Network
JSC	T	- Johnson Space Center
ASDC	U	- U. S. Army Strategic Defense Command
KMR	V	- Kwajalein Missile Range
	W	- 30 SPW (Space Wing)Formerly WSMC
DFRC	X	- Dryden Flight Research Center
NASA	Y	- National Aeronautics and Space Administration (NASA) Headquarters
WSTF	Z	- JSC White Sands Test Facility

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1100 - PROGRAM DESCRIPTION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	534319	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	01/30/03
		INITIAL DATE:	08/23/96
ITEM NUMBER:	T1DEGHKX	DATE LAST CHANGED:	02/12/04
SECTION:	1100	TIME LAST CHANGED:	15:22:49

REQUESTER: JSC
TEST CODE: INFO
TRACKING NO. S008-1 S01-02-2 S02-02-1 S03-01-1 S609-1
S804-1 S905-1 S910-1

1. DESCRIPTION: OPERATIONAL CONCEPTS - GENERAL

The ISS on-orbit activities are supported by an operations and utilization framework which is designed to ensure manageable and safe operations that promote the basic goal of productive and flexible utilization by the ISS user community. The crew, ground controllers, ground maintenance personnel, and ground processing personnel perform the functions needed to operate and sustain the orbiting facility. A community of scientists, engineers, and commercial entities participate in and benefit from the Program by using its unique capabilities to promote scientific discovery and to develop new technologies.

The ISS is operated by the crew, onboard automation, and ground controllers. The ISS has a 24-hour autonomous capability to protect critical systems, vehicle integrity, and crew survival. The crew will have sufficient data and command capability to control subsystem operations and payload operations in order to continue human-tended utilization and vehicle operations during loss of communication with the ground facilities, or to respond to vehicle failures and contingencies. Crew tasks include support for payload operations, visiting vehicle operations, extravehicular activity (EVA), robotics, and onboard maintenance.

A team of personnel located on the ground assists the ISS in its real-time operation by planning, monitoring, and controlling ISS activities. In parallel with real-time activities, ground teams process reusable logistics modules, prepare visiting vehicle with necessary logistics, integrate the next set of payloads, and plan and conduct training for the next several increments.

OPERATIONS

CONTINUED

[PRD] DATABASE RECORD: 534319
ITEM NUMBER: T1DEGHKX

The ISS on-orbit operations consists of the spacecraft system related activities will be performed by the ISS ground operations support at NASA field centers and the International Partners (IP) facilities. Efficient communication among ground facilities is vital to mission success. The program will require operational and administrative links as appropriate for facilities and functions including those outlined below:

Spacecraft systems support and mission planning and integration related activities will be performed by the ISS ground operations support at NASA field centers and the International Partners (IP) facilities. Efficient communication among ground facilities is vital to mission success. The Program will require operational and administrative links as appropriate for facilities and functions including those outlined below:

- o Space Station Control Center (SSCC): The SSCC is the ISS portion of the Mission Control Center - Houston (MCC-H) located at the Johnson Space Center (JSC). It will be host to the Mission Management Team (MMT) and the overall ISS Flight Director, and it will provide functionally for overall planning and command and control of vehicle operations and flight safety, integrated across all IP elements. The SSCC will also function as the facility for the U.S. Flight Control Team to perform more detailed command and control of the U.S. elements, including planning, maintenance, etc. The SSCC will require communications services to support these operations responsibilities. Real-time systems operations data will flow between the SSCC and the ISS. Vehicle systems data, planning data, voice, and video will flow between JSC and various U.S. and IP ground facilities.

- o Mission Control Center - Moscow (MCC-M): The MCC-M, at Korolev, Russia, under the oversight of the MMT and in coordination with the SSCC, is responsible for the launch, rendezvous, docking, and on orbit operations of Russian elements and vehicles. The MCC-M is responsible for control of selected core systems functions else where in the ISS, both in nominal and SSCC back-up scenarios. These functions will primarily use the Russian communications and tracking (C&T) resources, but may also be performed via the interface

CONTINUED

[PRD] DATABASE RECORD: 534319
ITEM NUMBER: T1DEGHKX

to the SSCC and it's space-to-ground communications systems. Interfaces are required between the SSCC and the MCC-M for data, voice, and video.

- Huntsville Operations Support Center (HOSC) - The HOSC, located at Marshall Space Flight Center (MSFC), provides the operational environment for all MSFC-supported space programs. It incorporates all systems required to perform data acquisition and distribution, telemetry processing, command services, database services, mission support services, and system monitoring and control. The Payload Operations Integration Center (POIC), located in the HOSC, will require communications services to support all utilization flights and all other increments supporting payload installation and operations during assembly phase. The POIC will exchange real-time data with geographically distributed user facilities in the U.S. and at IP locations. Payload commands and other data will be routed from the user operations facilities to the POIC for integration into the forward link command stream at the SSCC. The Payload Data Services System (PDSS), located in the HOSC, will be responsible for payload data processing and distribution. The PDSS will require communications services to receive ISS telemetry data and distribute payload data to user facilities in the U.S. and at IP locations. Communications requirements contained in this document for the POIC, PDSS, Remote Area for Payload Support (RAPS), and other MSFC operational facilities are routed through the HOSC.

- Telescience Support Center (TSC): The TSC is a NASA funded facility which provides the capability to plan and operate on-orbit facility class payloads and experiments, other payloads and experiments, and instruments.

- International Partners (IP) Facilities: The IP facilities are responsible for the coordinated command and control of IP systems and payloads. Data relating to IP ISS systems and experiments will be transferred to and from the Italian Space Agency (ASI), CSA, ESA, and JAXA. The IP's will provide communications services from designated termination point to their facilities.

- Training Facilities: Training facilities, including the Space

CONTINUED

[PRD] DATABASE RECORD: 534319
ITEM NUMBER: T1DEGHKX

Station Training Facility (SSTF) and the Payload Training Facility (PTF) at JSC, will provide ISS core systems and payload systems training for Program crews, ground support personnel, and users. This will require communications services to transfer Instructor Station data and simulated Space Station data, voice, and video.

- Automated Transfer Vehicle (ATV) Control Center (ATVCC): The ATV-CC, hosted by the Centre National d'Etudes Spatiales (CNES) in Toulouse, France, on behalf of the European Space Agency (ESA), contains the monitoring and control systems for operating the ATV from Launch to docking, during attached phases and from de-docking to destructive re-entry. During free-flight operations, from launch to ISS approach initiation, the ATV-CC and the launch authorities at Kourou spaceport, French Guiana, is the mission authority. During integrated operations, the ATV-CC is responsible for the mission execution control of the ATV operations under SSCC and MCC-M mission authority. The ATV-CC performs ATV monitoring and control throughout the mission, as well as ATV trajectory analysis and determination in both nominal and contingency scenarios. During the phases from launch/ascent to ATV-Ariane 5 separation until reaching the ISS vicinity and having established the direct ATV-ISS in-orbit (proximity) link, the ATV-CC will rely on TDRSS communications and tracking resources. During proximity, attached, and reboost operations, the Advanced Relay and Technology Mission Satellite (ARTEMIS) will be the prime communications resource; the ISS Russian On-Orbit Segment, ISS Russian ground stations, and TDRSS will be the secondary communications resources. In order to execute the ATV-CC mission control task, interfaces are required between the ATV-CC, SSCC and the MCC-M for data, voice, and video.

- H-II Transfer Vehicle (HTV) Control Center (HTVCC): The JAXA H-II Transfer Vehicle (HTV)Control Center (HTCC) will be located in the Space Station Integration and Promotion Center(SSIPC)in Tsukuba Space Center, Japan. The HTVCC will monitor and control the HTV from launch to ISS berthing, during attached phases of operations and from unberthing to destrustive re-entry. During all phases of operation, the HTVCC will control the HTV spacecraft while under the authority of SSCC during critical approach, berthing, attached, and unberthing phases. The main functions of the HTVCC are flight

CONTINUED

[PRD] DATABASE RECORD: 534319
ITEM NUMBER: T1DEGHKX

planning, flight control, training and test, and interfaces to the external operational organizations. HTVCC flight planning will include trajectory planning, flight evaluation for sequence of events, and mission analysis. Re-planning will also occur in the HTVCC for contingencies during real-time operations. HTVCC flight control includes telemetry processing and command generation. The flight control function will supply functions to assist "GO/NO GO" judgement of the operator such as calculation of error ellupsoid to judge possibility of collision between HTC and ISS evalution of flight status based on HTV telemetry, and evaluation of flight status after maneuvers. The HTVCC will house the functionality to perform HTV Training and Test. The training and test support will develop HTVCC training scenario and closed loop training using simulation software. Simulation capability will include GNC on-board software modeling, Sensor/Actuator mathematical modeling, environmental modeling (HTV dynamics, ISS dynamic, disturbance, etc) and, communication systems model (On-broad and ground systems) for both TDRS link and ISS link.
The HTVCC interfaces with SSCC via JEM Network System for HTV flight planning, command and telemetry for TDRS and ISS link, video, voice loops between HTVCC, SSCC and onboard crews related to HTV operations.

The HTVCC will also house interface equipments for CCSDS processing for HTV command and telemetry for TDRS link. The HTVCC also interfaces with the launch site for HTV launch operation.

- White Sands Complex (WSC): The WSC located in Las Cruces, New Mexico is the facility that houses the ground segment elements of the Tracking and Data Relay Satellite System (TDRSS). One element of the ground segment is the TDRSS Operations Control Center (TOCC). The TOCC controls and monitor the TDRSS spacecraft fleet and monitors TDRSS performance during active customer services.

- Data Services Management Center (DSMC): The DSMC located at the WSC provides scheduling, controlling and monitoring of the SN. This function includes control of all available network resources, schedule processing, conflict resolution, performance monitoring/ fault isolation and acquisition data dissemination. These functions allow the SN users to receive User Performance Data (UPD), transmit

CONTINUED

[PRD] DATABASE RECORD: 534319
ITEM NUMBER: T1DEGHKX

Ground Control Messages Request (GCMR) and scedule SN services.

- Network Integration Center (NIC): The NIC is located at the Goddard Flight Center (GSFC), Maryland. The NIC will monitor ISS activities as required such as Soyuz launch/docking, ISS mission critical periods, and ISS VHF ground station support.

- Flight Dynamics Facility (FDF): Located at GSFC in Greenbelt, Maryland, the FDF will provide state vector data and tracking data evaluation support for the ISS, ATV, and HTV missions. The FDF also has the ability to provide orbit determination support if required. Real-time support is also provided for Space Shuttle missions and Launch Vehicles (ELV). Additional support is provided for TDRSS performance assessment for the STDN/TDRSS System using tracking data from the ISS, Space Shuttle, scientific satellites, and special test. TDRSS support includes state vector generation, orbit determination, tracking data evaluation, spacecraft maneuver support and testing to verify and improve TDRSS pointing accuracy. The FDF also provides spacecraft planning products to the DSMC and other spacecraft and launch vehicle control centers.

SUPPLIER: DDMS AGENCY: DDMS/X (DEPARTMENT OF DEFENSE)

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 03/14/03

SUPPLIER: ER AGENCY: 45 RANS/DOS (E - 45TH SPACE WING)

SUPPLIER COMMITMENT: NOACK WILL COMMIT RESPONSE DATE: 01/30/03

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/11/03

SUPPLIER: KSC AGENCY: KSC/PH-B3B (K - KENNEDY SPACE CENTER)

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1100 - PROGRAM DESCRIPTION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 534319
ITEM NUMBER: T1DEGHKX

SUBSUPPLIER: BOEING P319 KA91-P346 P344
UB-E

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 02/21/03

SUPPLIER: DFRC AGENCY: DFRC/XOS (X - DRYDEN FLIGHT RESEARCH CENTER)
SUBSUPPLIER: FR

SUPPLIER COMMITMENT: NOACK WILL COMMIT RESPONSE DATE: 01/30/03

[PRD] DATABASE RECORD: 553436 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/25/01
INITIAL DATE: 10/07/99
ITEM NUMBER: T2DEGHKX DATE LAST CHANGED: 02/12/04
SECTION: 1100 TIME LAST CHANGED: 15:30:38

REQUESTER: JSC
TEST CODE: INFO
TRACKING NO. S008-1 S910-1

1. DESCRIPTION: SPACE VEHICLE DESCRIPTION

For the most current Space Vehicle Description, reference the International Space Station Program Baseline Configuration Document (SSP 50037, latest revision).

The Visiting Vehicles (VV's) currently included in the PRD are the Automated Transfer Vehicle supplied by the European Space Agency (ESA) and the H-II Transfer Vehicle (HTV) supplied by the Japan Aerospace Exploration Agency (JAXA) of Japan. The ATV description can be found in SSP 50335, ESA/NASA /RSA Trilateral ATV Demonstration and Nominal Operations Flight Plan and SSP 41160, Segment Specification for the European Space Agency Segment. The HTV description can be found in SSP 50272, Segment Specification for the H-II Transfer Vehicle (HTV).

SUPPLIER: DDMS AGENCY: DDMS/X (DEPARTMENT OF DEFENSE)

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 01/09/03

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1100 - PROGRAM DESCRIPTION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 553436
ITEM NUMBER: T2DEGHKX

SUPPLIER: ER AGENCY: 45 RANS/DOU (45TH SPACE WING)

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 04/24/01

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 01/26/01

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 03/27/02

SUPPLIER: KSC AGENCY: KSC/PZ-H-C (K - KENNEDY SPACE CENTER)
SUBSUPPLIER: KA91-P346 P344

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 05/06/02

SUPPLIER: DFRC AGENCY: DFRC/OS (DRYDEN FLIGHT RESEARCH CENTER)
SUBSUPPLIER: FD

SUPPLIER COMMITMENT: INFO WILL COMMIT RESPONSE DATE: 02/25/02

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 1405 - TEST VEHICLE INSTRUMENTATION FREQUENCY SUMMARY

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 553814 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 11/09/99
INITIAL DATE: 11/09/99
ITEM NUMBER: T1G DATE LAST CHANGED: 07/03/02
SECTION: 1405 TIME LAST CHANGED: 08:10:52

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. P911-1

1. DESCRIPTION: SPECTRUM MANAGEMENT

OSF shall provide frequency and spectrum management services for all space-to-ground, ground-to-space, and space-to-space transmission links.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/22/00

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2000 - TEST REQUIREMENTS/SUPPORT PLANS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	533532	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	01/30/03
		INITIAL DATE:	08/23/96
ITEM NUMBER:	T1G	DATE LAST CHANGED:	02/28/03
SECTION:	2000	TIME LAST CHANGED:	14:33:40

REQUESTER:	JSC				
TEST CODE:	CORE	FLT 2A			
TRACKING NO.	S008-1	S01-02-2	S01-05-5	S012-1	S02-02-1
	S03-01-1	S609-1	S804-1	S905-1	S910-1

1. DESCRIPTION: TRACKING AND DATA RELAY SATELLITE SYSTEM

The Tracking and Data Relay Satellite System (TDRSS) shall support the International Space Station (ISS) Program by providing S-Band and Ku-Band communications. TDRSS S-Band Single Access (SSA), S-Band Multiple Access (MA), and Ku-Band Single Access (KSA) capabilities shall support the various ISS Program Communications and Tracking (C&T) Systems.

Service for three different ISS S-Band systems are required. These systems are the Assembly Contingency Subsystem (ACS) S-Band system, ATV S-Band system, and HTV S-Band system. One SA service is required to support S and K RF links with a second SA service required during critical ISS operations such as rendezvous, EVA, VV launch, and other critical activities.

The ISS ACS SSAF link data rate operates at 72 kbps (High Data Rate mode) or 6 kbps (Low Data Rate mode). ACS SSAR link data rate operates at 192kbps (High Data Rate mode) and 12kbps (Low Data Rate mode).

TDRSS support is required for one ISS Ku-band service (forward and return) starting with the Space to Ground System (SGS) activation on flight 5A.1. The ISS SGS Ku-band return link signal is 50 Mbps containing payload data, video, and on-board recorded telemetry. The Ku-band returned link data rate may be upgraded to 75 Mbps or 150 Mbps after flight 8A.

ISS requires a Ku-band Single Access Forward (KSAF) link service. The KSAF will be either a PN spread signal or a 3 Mbps data modulated signal. The PN spread signal will be used for ISS antenna autotrack operations only and may be any PN code. The Ku-band forward link data rate may be upgraded to approximately 12 Mbps in the future.

CONTINUED

[PRD] DATABASE RECORD: 533532
ITEM NUMBER: T1G

The ATV S-Band system operates in MA at 8 kbps return link and 1 kbps forward link. The ATV S-band system operates in SSA at 8 or 64 kbps return link and 1 kbps forward link. The ATV shall require continuous TDRSS forward and return link, including the Zone of Exclusion (ZOE) during critical phases of flight. In addition, ATV will utilize TDRSS covering the attached phase periodically for eight (8) minutes at 8 kbs MA.

The HTV S-band forward link system operates at 250 bps SSA only. No MA forward link is required. The HTV S-band return link system operates is SSA at 8Kbps normal, or 2.0Kbps contingency. The HTV MA return link operates at 2.0Kbps normal. The HTV shall require continuous TDRSS forward and return link, including the Zone of Exclusion (ZOE) during critical phases of flight.

The ISS Program requires one dedicated S-band and one KU-band single access service for prime, ISS support with continuous TDRSS coverage except for periods of interruption necessitated by ISS masking, the zone of exclusion (ZOE), or TDRS handover, with limited two SA support during critical events. Critical periods will be defined through negotiations between GSFC Network Director and the ISS Program. Coverage during ZOE transit via the GUAM Remote Ground Terminal (GRGT) is required for all ISS S-band elements, but KSA services are not required during ZOE.

OND: FLIGHT 2A -6 MONTHS FOR TDRSS S-BAND SUPPORT
FLIGHT 5A.1 -6 MONTHS FOR TDRSS Ku-BAND SUPPORT

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

[PRD] DATABASE RECORD: 534321 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T2GT DATE LAST CHANGED: 02/28/03
SECTION: 2000 TIME LAST CHANGED: 14:34:12

CONTINUED

[PRD] DATABASE RECORD: 534321
ITEM NUMBER: T2GT

REQUESTER: JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S01-05-5 S03-01-1 S609-1 S804-1
S910-1

1. DESCRIPTION: TDRSS GROUND STATION CONFIGURATION

Ground Configuration Message Requests (GCMRs) and GCMR acknowledgements for the ISS shall share the same communications interface as the Shuttle messages of the same type. The SSCC shall provide conflict-free GCMRs and TDRSS link management for all ISS elements including ACS, ATV, and HTV. Refer to the 451 ICD-NCCDS-MOC Annex 10 for detailed interface requirements.

OND: FLIGHT 2A -6 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/30/03

[PRD] DATABASE RECORD: 534320 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T3GT DATE LAST CHANGED: 02/28/03
SECTION: 2000 TIME LAST CHANGED: 14:34:43

REQUESTER: JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S01-04-2 S01-05-5 S03-01-1 S609-1
S804-1 S910-1

1. DESCRIPTION: SSCC and DSMC for TDRSS SCHEDULING MESSAGES

Scheduling messages for ISS shall simultaneously share the same communications interfaces as the Shuttle scheduling messages. The SSCC

CONTINUED

[PRD] DATABASE RECORD: 534320
ITEM NUMBER: T3GT

shall supply conflict-free TDRSS scheduling messages for all ISS elements including ACS, ATV and HTV. Refer to the 451-ICD-NCCDS-MOC Annex 10 for detailed interface requirements.

REF: ITEM T43GT ISO2734 DBR 556504

OND: FLIGHT 2A -6 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/30/03

[PRD] DATABASE RECORD: 534322 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T4G DATE LAST CHANGED: 02/28/03
SECTION: 2000 TIME LAST CHANGED: 14:35:32

REQUESTER: JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S01-04-2 S03-01-1 S609-1 S804-1
S910-1

1. DESCRIPTION: USER PERFORMANCE DATA MESSAGES

User Performance Data (UPD) messages for all ISS simultaneously share the same communications interface as the Shuttle messages of the same type. Refer to the 451-ICD-NCCDS-MOC Annex 10 for detailed interface requirements.

OND: FLIGHT 2A -6 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2000 - TEST REQUIREMENTS/SUPPORT PLANS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 534322
ITEM NUMBER: T4G

[PRD] DATABASE RECORD: 533534 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/08/99
INITIAL DATE: 08/23/96
ITEM NUMBER: T5G DATE LAST CHANGED: 07/03/02
SECTION: 2000 TIME LAST CHANGED: 08:05:12

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S609-1 S804-1 S905-1

1. DESCRIPTION: SYSTEM VERIFICATION

GSFC will support a validation/verification process that demonstrates compatibility, technical performance, capabilities, and operational readiness between ISS elements and the TDRSS, GN and VHF communication systems.

The NASA Integrated Services Network (NISN) will support a validation/ verification process that demonstrates technical performance, capabilities, and operational readiness of all NISN provided Ground to Ground communications services.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 05/21/99

[PRD] DATABASE RECORD: 533537 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: HT6G DATE LAST CHANGED: 02/28/03
SECTION: 2000 TIME LAST CHANGED: 14:36:21

REQUESTER: MSFC JSC
TEST CODE: CORE
TRACKING NO. S008-1 S03-01-1 S609-1 S804-1 S905-1

1. DESCRIPTION: SECURITY REQUIREMENTS

NISN provided communications services shall comply with NASA

CONTINUED

[PRD] DATABASE RECORD: 533537
ITEM NUMBER: HT6G

Procedures and Guidelines (NPG) 2810.1, NASA's Information Technology (IT) Security Program (latest revision). Mission Critical Systems/ Mission (MSN) information, refers to those mission services formerly known as AIS Level 3. Scientific, Engineering, and Research (SER) information, refers to those mission services formerly known as ASI Level 2. In addition, the users of NISN services shall comply with the NMI 8610.11 (latest revision which expired), "Control of Access to Operational Voice Communications Circuits" (and the replacement policy currently being drafted by JSC/MOD/DA8) to preclude unauthorized access and potential damage to operational systems and user security. Interfacility Interface Control Documents (ICD's) shall address security.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

[PRD] DATABASE RECORD: 544759 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 10/07/99
INITIAL DATE: 04/24/98
ITEM NUMBER: T7G DATE LAST CHANGED: 07/03/02
SECTION: 2000 TIME LAST CHANGED: 08:05:36

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S804-1 S905-1 S910-1

1. DESCRIPTION: NETWORK MANAGEMENT

The Program requires the Mission Services Program to provide network management services for all communications networks. These services shall include, but not be limited to: scheduling, monitoring performance, providing status to the Program, and providing network configuration management.

The networks provided shall be managed and operated in such a way as to minimize the need for operational interaction between network operators and SSCC/POIC operators and/or payload users.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2000 - TEST REQUIREMENTS/SUPPORT PLANS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 544759
ITEM NUMBER: T7G

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/26/01

[PRD] DATABASE RECORD: 558535 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 02/07/01
ITEM NUMBER: T11G DATE LAST CHANGED: 02/28/03
SECTION: 2000 TIME LAST CHANGED: 14:36:50

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S01-02-2 S03-01-1

1. DESCRIPTION: WSC QUALITY OR SERVICE

The data systems at the White Sands Complex (WSC) shall monitor the systems supporting the forward and return data services for all ISS elements requiring TDRSS support. User Performance Data (UPD) shall be transmitted to the SSCC, GSFC NIC, and the HOSC.

SUPPLIER: GSFC AGENCY: GSFC/450 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2100 - METRIC DATA

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533540 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/00
INITIAL DATE: 08/23/96
ITEM NUMBER: EGT2GT DATE LAST CHANGED: 02/12/04
SECTION: 2100 TIME LAST CHANGED: 15:22:49

REQUESTER: ER GSFC JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S609-1 S804-1 S905-1 S910-1

1. DESCRIPTION: TDRS STATE VECTORS

When required, the GSFC FDF shall provide the SSCC with Tracking and Data Relay Satellite (TDRS) state vectors for ISS-to-TDRS pointing computations and for Visiting Vehicles-to-TDRS pointing computations to the SSCC. TDRS state vectors for ATV and HTV support will be supplied by the SSCC to the ESA and JAXA gateways as required. The TDRS state vectors accuracy requirement is 200 meters, three sigma. State vector formats are specified in JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol.1, latest revision).

OND: FLIGHT 2A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/26/01

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/23/00

[PRD] DATABASE RECORD: 533541 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/11/02
INITIAL DATE: 08/23/96
ITEM NUMBER: T3G DATE LAST CHANGED: 12/09/02
SECTION: 2100 TIME LAST CHANGED: 13:18:39

REQUESTER: JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S01-05-5 S02-02-1 S609-1 S610-3 S804-1
S905-1 S910-1 S912-1

1. DESCRIPTION: ISS TRANSMITTED FREQUENCY MEASUREMENT

CONTINUED

[PRD] DATABASE RECORD: 533541
ITEM NUMBER: T3G

The GSFC FDF shall process ACS S-band, ATV S-Band, HTV S-band, and Ku-Band one way doppler data to be used for determining the operational short and long term stability of the ISS transponders. This processing shall be provided when scheduled until transponders frequency shift signatures are established for all S-Band services and the Ku-Band services. Results shall be provided to the SSCC for use in estimating the required frequency information in the TDRSS sheduling and ground control messages.

The responsible Visiting Vehicle control center shall process appropriate data to be used for determining the operational short and long term stability of the transponders. This processing shall be provided when scheduled until transponder frequency shift signatures are established for S-Band services. Results shall be provided to the SSCC, ATVCC, and HTVCC for use in estimating the required frequency information in the TDRSS scheduling and ground control messages.

OND: FLIGHT 2A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

[PRD] DATABASE RECORD: 551187 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/25/01
INITIAL DATE: 04/13/99
ITEM NUMBER: GT4G DATE LAST CHANGED: 12/09/02
SECTION: 2100 TIME LAST CHANGED: 13:24:21

REQUESTER: GSFC JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S904-1 S905-1 S910-1

1. DESCRIPTION: ISS STATE VECTORS

The JSC SSCC shall provide, as required, ISS, ATV, HTV, and Soyuz acquisition data to the TDRS via GSFC FDF. The ATV and HTV

CONTINUED

[PRD] DATABASE RECORD: 551187
ITEM NUMBER: GT4G

acquisition data shall be provided by the ATV and HTV control centers, respectively, to the SSCC. State vector formats are specified in JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, VOL.1, latest revision).

OND: FLIGHT 2A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/26/01

[PRD] DATABASE RECORD: 551188 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/13/02
INITIAL DATE: 04/15/99
ITEM NUMBER: GT5T DATE LAST CHANGED: 02/12/04
SECTION: 2100 TIME LAST CHANGED: 15:22:49

REQUESTER: GSFC JSC
TEST CODE: CORE
TRACKING NO. S008-1 S01-02-2 S905-1 S910-1

1. DESCRIPTION: PRE-LAUNCH, LAUNCH, EARTH ORBIT, and REENTRY PHASES

ESA and JAXA will provide the GSFC FDF with electronic data defining the launch vehicle trajectory from launch through spacecraft separation. Since this is a rendezvous, requiring inertial place targeting, multiple trajectories may be required to define the trajectory across the launch window. Data is required by launch minus 90 days.

ESA and JAXA will provide the GSFC FDF with electronic data defining the Visiting Vehicle trajectory from spacecraft separation to rendezvous with the ISS. Data is required by launch minus 90 days.

Both ascent and post spacecraft separation phases of the mission may be merged into one electronic trajectory file in a TBD format.

Trajectory data is required for pre-mission trajectory analysis and as

CONTINUED

[PRD] DATABASE RECORD: 551188
ITEM NUMBER: GT5T

a source for launch support state vectors. These launch support vectors are required for TDRSS pointing during the launch phase.

During the Orbit phase ESA and JAXA will provide the GSFC FDF with updated electronic trajectory data for ATV and HTV in real-time to maintain TDRS pointing. Vectors should be formatted in accordance witht the JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, VOL.I, latest revision).

During Re-entry phase ESA, JAXA and SSCC will provide the GSFC FDF with electromic data defining the Visiting Vehicle trajectory from undocking through re-entry. The Visiting Vehicle Control Center/SSCC will notify the GSFC FDF 48 hours prior to Visiting Vehicle undocking. Trajectory data is required no later than no later than 4 hours prior to the event. Vectors should be formatted in accordance with the JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision).

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/13/02

[PRD] DATABASE RECORD: 556069 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 06/23/00
ITEM NUMBER: T6EGX DATE LAST CHANGED: 02/28/03
SECTION: 2100 TIME LAST CHANGED: 14:37:26

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S008-1 S02-02-1 S03-01-1

1. DESCRIPTION: C-BAND RADAR SUPPORT

NASA and DoD C-Band radar support is required for ISS free flyer support. Support is currently estimated at approximately 15 passes per year and will be scheduled as required. Currently, use of C-Band Metric Data is to support the:

CONTINUED

[PRD] DATABASE RECORD: 556069
ITEM NUMBER: T6EGX

1. Tracking of the Soyuz to provide updated pointing information for the VHF 2 communications systems at the NASA VHF stations.

2. Other ISS free flying elements as required.

SUPPLIER: ER AGENCY: 45 RANS/DOU (45TH SPACE WING)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 01/30/03

SUPPLIER: GSFC AGENCY: GSFC/450 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: DFRC AGENCY: DFRC/OS (DRYDEN FLIGHT RESEARCH CENTER)
SUBSUPPLIER: FD

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 01/30/03

[PRD] DATABASE RECORD: 556070 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/00
INITIAL DATE: 06/23/00
ITEM NUMBER: T7 DATE LAST CHANGED: 08/02/02
SECTION: 2100 TIME LAST CHANGED: 09:59:08

REQUESTER: JSC
SUBREQUESTER: JSC/DM
TEST CODE: CORE INFO

1. DESCRIPTION: HQ, USSPACECOM REQUIREMENT

HQ, USSPACECOM support to NASA Human Space Flight operations will be provided as specified in the JSC/HQ, USSPACECOM Memorandum of Understanding the HQ USSPACECOM/JSC ICD, and the JSC/HQ, USSPACECOM Joint CONOPS.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2100 - METRIC DATA

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 556071 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/00
INITIAL DATE: 06/23/00
ITEM NUMBER: T8E DATE LAST CHANGED: 08/02/02
SECTION: 2100 TIME LAST CHANGED: 10:22:28

REQUESTER: JSC
SUBREQUESTER: JSC/DM
TEST CODE: CORE
TRACKING NO. S008-1

1. DESCRIPTION: SSC, USSPACECOM COMBO REQUIREMENTS

USSPACECOM is requested to provide conjunction screening (within existing capabilities) of all catalogued objects and NASA Human Space Flight Vehicles. This information should be provided to the Flight Dynamics Officer (FDO) and or TOPO at JSC verbally and in writing as requested.

REF: ITEM T43E FLS2100 DBR 198887

SUPPLIER: ER AGENCY: 45 RANS/DOU (45TH SPACE WING)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/24/01

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2200 - TELEMETRY DATA

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533542 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 05/11/01
INITIAL DATE: 08/23/96
ITEM NUMBER: T1G DATE LAST CHANGED: 12/09/02
SECTION: 2200 TIME LAST CHANGED: 14:02:35

REQUESTER: JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S01-05-5 S609-1 S905-1 S910-1

1. DESCRIPTION: WSC RECORDING INTERVAL

The S-Band and Ku-Band return links shall be recorded at the White Sand Complex (WSC) for all ISS elements and held for a period of 50 hours or longer if specifically requested. Playback shall be required in the event of communications or facility failures. Playback of the Ku-Band data will utilize the same communications link as the real-time data, but real-time and playback will not be transmitted simultaneously. Playback of S-band data shall occur simultaneously (on separate channel) with real-time support. Playback of ACS, ATV and H TV S-band data shall utilize one common, shared playback channel.

OND: FLIGHT 2A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/06/01

[PRD] DATABASE RECORD: 533544 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/06/02
INITIAL DATE: 08/23/96
ITEM NUMBER: T2G DATE LAST CHANGED: 12/10/02
SECTION: 2200 TIME LAST CHANGED: 09:42:04

REQUESTER: JSC
TEST CODE: CORE FLT 4A
TRACKING NO. S008-1 S01-05-5 S02-02-1 S609-1 S610-1
S804-1 S910-1

1. DESCRIPTION: ASSEMBLY CONTINGENCY SUBSYSTEM (ACS) S-BAND RETURN SERVICE FROM WSC TO SSCC

The ACS SSAR link data rate operates at 192Kbps (High Data Rate mode), 12Kbps (Low Date Rate mode). The ISS ACS System can be operated

CONTINUED

[PRD] DATABASE RECORD: 533544
ITEM NUMBER: T2G

coherently or non-coherently, but generally in the non-coherent mode.

The requirements for the ACS S-Band return data to the SSCC are as follows:

a. A 192 / 12 kbps, synchronous, serial bitstream data and clock service shall be provided for the transfer of S-Band downlink telemetry.
b. A 192 / 12 kbps, synchronous, serial bitstream data and clock service shall be provided for the transfer of recorded S-Band downlink telemetry. The recorded ACS S-Band service recorded HTV S-Band service, and recorded ATV S-Band service shall share a single ISS recorded S-band service configurable to 192/64/12/8/2/1 Kbps data rate.
c. A NISN Real-time Critical Service is required.
d. SSCC Mission Critical Systems/MSN security level interface is required.
e. The data transport delay shall not exceed 600 ms from WSC to SSCC. The delay shall not vary.
f. The maximum bit error rate shall be 10E-6.
g. The communications service shall be transparent to the SSCC. (i.e., the data shall be presented by the communications equipment to the SSCC in the same format as that presented by the WSC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the SSCC and shall require no additional processing or data handling capabilities on the part of the SSCC. The data provided by the WSC shall not be altered by the communications service.)
h. The communications service shall be capable of handling rate changes between 192 kbps and 12 kbps.
i. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface requirements.

OND: FLIGHT 4A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

CONTINUED

[PRD] DATABASE RECORD: 533544
ITEM NUMBER: T2G

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

[PRD] DATABASE RECORD: 533545 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/00
INITIAL DATE: 08/23/96
ITEM NUMBER: H3G DATE LAST CHANGED: 12/10/02
SECTION: 2200 TIME LAST CHANGED: 09:48:05

REQUESTER: MSFC
TEST CODE: CORE FLT 4A
TRACKING NO. S008-1 S609-1 S610-1 S804-1 S905-1
S910-1

1. DESCRIPTION: ASSEMBLY CONTINGENCY SUBSYSTEM (ACS) S-BAND RETURN SERVICE FROM WSC TO HOSC

The ACS SSAR link data rate operates at 192Kbps (High Data Rate mode), 12Kbps (low data rate). The ISS system can be operated coherently or non-coherently, but generally in the non-coherent mode.

The requirements for the S-band return data to the HOSC are as follows:

a. A 192 / 12 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of S-Band downlink telemetry.
b. A 192 / 12 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of recorded S-Band downlink telemetry.
c. A NISN Mission Critical Service is required.
d. HOSC Mission Critical Systems/SER security level or higher is required.
e. The data transport delay shall not exceed 600 ms from WSC to HOSC.
f. The maximum bit error rate shall be 10E-6.
g. The communications service shall be transparent to the HOSC. (i.e., the data shall be presented by the communications equipment to the HOSC in the same format as that presented by the WSC to the communications equipment.

CONTINUED

[PRD] DATABASE RECORD: 533545
ITEM NUMBER: H3G

Any overhead added by the communications service shall be removed from the data prior to delivery to the HOSC and shall required no additional processing or data handling capabilities on the part of the HOSC. The data provided by the WSC shall not be altered by the communications service.)

h. The communications service shall be capable of handling rate changes between 192 kbps and 12 kbps.

OND: FLIGHT 4A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/26/01
RESPONSE:

[PRD] DATABASE RECORD: 533546 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 08/15/00
INITIAL DATE: 08/23/96
ITEM NUMBER: T4G DATE LAST CHANGED: 12/10/02
SECTION: 2200 TIME LAST CHANGED: 09:57:16

REQUESTER: JSC
TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S609-1 S804-1 S905-1 S910-1

1. DESCRIPTION: Ku-BAND RETURN SERVICE FROM WSC TO THE SSCC

The KSAR link data rate operates at 50 Mbps. In the future, the KSAR link may be upgraded to 75 Mbps, and then to 150 Mbps.

The requirements for Ku-Band return data to the SSCC are as follows:

a. A 50 Mbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of Ku-Band downlink data.
b. A NISN Mission Critical Service is required.

CONTINUED

[PRD] DATABASE RECORD: 533546
ITEM NUMBER: T4G

c. SSCC Mission Critical Systems/MSN security level interface is required.
d. The data transport delay shall not exceed 600 ms from WSC to SSCC. The delay shall not vary.
e. The maximum bit error rate shall be 10E-6.
f. The communications service shall be transparent to the SSCC. (i.e., the data shall be presented by the communications equipment to the SSCC in the same format as that presented by the WSC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the SSCC and shall not be altered by the communications service.)
g. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface.

OND: FLIGHT 5A.1 -1 MONTH

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/26/01
RESPONSE:

[PRD] DATABASE RECORD: 533547 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/06/02
INITIAL DATE: 08/23/96
ITEM NUMBER: H5G DATE LAST CHANGED: 12/10/02
SECTION: 2200 TIME LAST CHANGED: 09:58:38

REQUESTER: MSFC
TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S02-02-1 S609-1 S804-1 S905-1
S910-1

1. DESCRIPTION: Ku-BAND RETURN SERVICE FROM WSC TO THE HOSC

The KSAR link data rate operates at 50 Mbps. In the future, the

CONTINUED

[PRD] DATABASE RECORD: 533547
ITEM NUMBER: H5G

KSAR link may be upgraded to 75 Mbps, and then to 150 Mbps.

The requirements for Ku-band return data to the HOSC are as follows:

a. A 50 Mbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of Ku-band downlink data.
b. A NISN Mission Critical Service is required.
c. HOSC Mission Critical Systems/SER security level or higher interface is required.
d. The data transport delay shall not exceed 600ms from WSC to HOSC. The delay shall not vary.
e. The maximum bit error rate shall be 10E-6.
f. The communications service shall be transparent to the HOSC. (i.e., the data shall be presented by the communications equipment to the HOSC in the same format as that presented by the WSC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the HOSC and shall require no additional processing or data handling capabilities on the part of the HOSC. The data provided by the WSC shall not be altered by the communications service.)

OND: FLIGHT 5A.1 -3 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

[PRD] DATABASE RECORD: 553526 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/06/02
INITIAL DATE: 11/04/99
ITEM NUMBER: T14G DATE LAST CHANGED: 12/10/02
SECTION: 2200 TIME LAST CHANGED: 10:03:02

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S008-1 S02-02-1 S911-1 S912-1

CONTINUED

[PRD] DATABASE RECORD: 553526
ITEM NUMBER: T14G

1. DESCRIPTION: ATV S-BAND RETURN FROM WSC TO SSCC

The ATV SSAR link data rate operates at 64 or 8 Kbps. The ATV S-band MA Return link data rate operates at 8 Kbps. The ATV S-band system can be operated coherently or non-coherently. ATV requirement for TDRSS coherent mode operation is the ATV tracking purposes only.

a. A 8/64 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of S-Band downlink telemetry.
b. A 8/64 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of recorded S-band downlink telemetry. The recorded ACS S-band service, recorded HTV S-band service, and recorded ATV S-band service shall share a single ISS recorded S-band service configurable to 192/64/12/8/2/1 kbps data rates.
c. A NISN Mission Critical Service is required.
d. SSCC Mission Critical Systems/MSN security level interface is required.
e. The data transport delay shall not exceed 600 ms from WSC to SSCC. The delay shall not vary.
f. The maximum bit error rate shall be 10E-6.
g. The communications service shall be transparent to the ESA Gateway. (i.e., the data shall be presented by the communications equipment to the ESA Gateway in the same format as that presented by the WSC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the ESA Gateway and shall require no additional processing or handling capabilities on the part of the ESA Gateway. The data provided by the WSC shall not be altered by the communications service).
h. The communications service shall be capable of handling rate changes between 8 and 64 kbps.
i. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision.) for detailed interface requirements.

OND: TBS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

CONTINUED

[PRD] DATABASE RECORD: 553526
ITEM NUMBER: T14G

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

[PRD] DATABASE RECORD: 553529 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/06/02
INITIAL DATE: 11/05/99
ITEM NUMBER: T15G DATE LAST CHANGED: 02/12/04
SECTION: 2200 TIME LAST CHANGED: 15:22:49

REQUESTER: JSC
SUBREQUESTER: HTV
TEST CODE: CORE
TRACKING NO. S008-1 S01-05-5 S02-02-1 S911-1 S912-1

1. DESCRIPTION: HTV S-BAND RETURN FROM WSC TO SSCC

The HTV SSAR link data rate operates at 8 and 2 Kbps. The HTV S-band MA Return link data rate operates at 2 Kbps. The HTV S-band system can be operated coherently or non-coherently. HTV requirement for TDRSS coherent mode operation is for HTV tracking purposes only.

a. A 8 and 2 Kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of S-band downlink telemetry.
b. A 8 and 2 Kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of recorded S-band downlink telemetry. The recorded ACS S-Band service, recorded HTV S-band service, and recorded ATV S-Band service shall share a single ISS recorded S-band service configured to 192/64/12/8/2/1 kbps data rates.
c. A NISN Real-time Critical Service is required.
d. SSCC Mission Critical Systems/MSN security level interface is required.
e. The data transport delay shall not exceed 600 ms from WSC to SSCC. The delay shall not vary.
f. The maximum bit error rate shall be 10E-6.
g. The communications service shall be transparent to the JAXA Gateway. (i.e., the data shall be presented by the communications equipment to the JAXA Gateway in

CONTINUED

[PRD] DATABASE RECORD: 553529
ITEM NUMBER: T15G

the same format as that presented by the WSC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the JAXA Gateway and shall require no additional processing or data handling capabilities on the part of the JAXA Gateway. The data provided by the WSC shall not be altered by the communications service).

h. The communications service shall be capable of handing rate changes between 8 and 2 Kbps.

i. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface requirements.

OND: TBS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: INWORK SEE RESPONSE RESPONSE DATE: 03/14/02
RESPONSE: Waiting on a required date.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2300 - COMMAND SYSTEMS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 544838 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/26/00
INITIAL DATE: 04/30/98
ITEM NUMBER: HT3G DATE LAST CHANGED: 12/10/02
SECTION: 2300 TIME LAST CHANGED: 10:27:24

REQUESTER: MSFC JSC
TEST CODE: CORE FLT 4A
TRACKING NO. S008-1 S804-1 S910-1 S912-1

1. DESCRIPTION: ASSEMBLY CONTINGENCY SUBSYSTEM (ACS) S-BAND FORWARD SUPPORT FROM SSCC TO WSC

The ISS ACS SSAF link data rate operates at 72 kbps (High Data Rate mode) or 6 kbps (Low Data Rate mode).

a. A 72 / 6 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of spacecraft uplink data.
b. A NISN Real-time Critical Service is required.
c. SSCC Mission Critical Systems/MSN security level interface is required.
d. The data transport delay shall not exceed 400 ms from SSCC to WSC. The delay shall not vary.
e. The maximum bit error rate shall be 10E-6.
f. The communications service shall be transparent to the WSC. (i.e., the data shall be presented by the communications equipment to the WSC in the same format as that presented by the SSCC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the WSC and shall require no additional processing or data handling capabilities on the part of the WSC. The data provided by the SSCC shall not altered by the communications service.)
g. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface.
h. The communications service shall be capable of supporting rate changes between 72 kbps and 6 kbps.
i. The WSC shall remove the modulation from the TRDSS forward link to the ISS when signals are removed at the SSCC output.

OND: FLIGHT 4A -6 MONTHS

CONTINUED

[PRD] DATABASE RECORD: 544838
ITEM NUMBER: HT3G

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 03/26/01
RESPONSE: NOCMT - 10i - Not a NISN item.

[PRD] DATABASE RECORD: 553539 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/26/00
INITIAL DATE: 11/05/99
ITEM NUMBER: T5GT DATE LAST CHANGED: 01/30/03
SECTION: 2300 TIME LAST CHANGED: 15:22:26

REQUESTER: JSC
SUBREQUESTER: HTV
TEST CODE: CORE
TRACKING NO. S008-1 S911-1

1. DESCRIPTION: HTV S-BAND FORWARD SUPPORT FROM SSCC TO WSC

The S-band Single Access Forward (SSAF) link and/or S-band MA forward link originate at the SSCC and shall be transported to the WSC. The HTV SSAF link operates at 250 bps.

a. A 250 bps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of spacecraft uplink data.
b. A NISN Real-time Critical Service is required.
c. SSCC Mission Critical Systems/MSN security level interface is required.
d. The data transport delay shall not exceed 400ms from SSCC to WSC. The delay shall not vary.
e. The maximum bit error rate shall be 10E-6.
f. The communications service shall be transparent to the WSC. (i.e., the data shall be presented by the communications equipment to the WSC in the same format as that presented by the SSCC to the communications

CONTINUED

[PRD] DATABASE RECORD: 553539
ITEM NUMBER: T5GT

equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the WSC and shall require no additional processing or data handling capabilities on the part of the WSC. The data provided by the SSCC shall not be altered by the communications service).

g. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface requirements.

h. The WSC shall remove the modulation from the TRDSS forward link to the ISS when signals are removed at the SSCC output.

OND: TBS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: INWORK RESPONSE DATE: 01/26/01

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/26/00

[PRD] DATABASE RECORD: 553540 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/06/02
INITIAL DATE: 11/05/99
ITEM NUMBER: T6GT DATE LAST CHANGED: 12/10/02
SECTION: 2300 TIME LAST CHANGED: 10:31:36

REQUESTER: JSC
SUBREQUESTER: ATV
TEST CODE: CORE
TRACKING NO. S008-1 S01-02-2 S02-02-1 S911-1 S912-1

1. DESCRIPTION: ATV S-BAND FORWARD SUPPORT FROM SSCC TO WSC

The ISS S-band Single Access Forward (SSAF) link and/or S-band MA forward links originate at the SSCC and shall be transported to the WSC. The ATV SSAF link operates at 1Kbps. The ATV S-band forward link

CONTINUED

[PRD] DATABASE RECORD: 553540
ITEM NUMBER: T6GT

data rate operates at 1 Kbps in MA.

a. A 1 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of spacecraft uplink data.
b. A NISN Real-time Critical Service is required.
c. SSCC Mission Critical Systems/MSN security level interface is required.
d. The data transport delay shall not exceed 400 ms from SSCC to WSC. The delay shall not vary.
e. The maximum bit error rate shall be 10E-6.
f. The communications service shall be transparent to the WSC. (i.e., the data shall be presented by the communications equipment to the WSC in the same format as that presented by the SSCC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the WSC and shall require no additional processing or data handling capabilities on the part of the WSC. The data provided by the SSCC shall not be altered by the communications service).
g. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface requirements.
h. The WSC shall remove the modulation from the TRDSS forward link to the ISS when signals are removed at the SSCC output.

OND: TBS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/06/02

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2300 - COMMAND SYSTEMS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	553541	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	08/15/00
		INITIAL DATE:	11/05/99
ITEM NUMBER:	T7GT	DATE LAST CHANGED:	12/10/02
SECTION:	2300	TIME LAST CHANGED:	10:40:27

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S008-1 S911-1 S912-1

1. DESCRIPTION: KU-BAND FORWARD SUPPORT FROM SSCC TO WSC

The ISS requires either a pseudo-random (PN) spread or data modulated Ku-band Single Access Forward (KSAF) link. A given TDRSS support event may contain both modulation or PN spreading, but not at the same time. The service will be configured by Ground Control Message Requests (GCMR) during the event to switch between data modulated or PN spread.

Data will originate at the SSCC and be transported to WSC at 3 Mbps. In the future, an ISS upgrade to accommodate a data rate of approximately 12 Mbps, and the 25 Mbps, may occur.

The PN spreading is used by the ISS for autotrack operations only and can be any PN code.

a. A 3 Mbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of spacecraft uplink data.
b. A NISN Real-time Critical Service is required.
c. SSCC Mission Critical Systems/MSN security level interface is required.
d. The data transport delay shall not exceed 400 ms from SSCC to WSC.
e. The maximum bit error rate shall be 10E-6.
f. The communications service shall be transparent to the WSC. (i.e., the data shall be presented by the communications equipment to the WSC in the same format as that presented by the SSCC to the communications equipment. Any overhead added by the communications service shall be removed from the data prior to delivery to the WSC and shall require no additional processing or data handling capabilities on the part of the WSC. The

CONTINUED

[PRD] DATABASE RECORD: 553541
ITEM NUMBER: T7GT

data provided by the SSCC shall not be altered by the communications service).

g. Refer to JSC/GSFC Operational Communications ICD for MCC Systems (JSC 11534, Vol. I, latest revision) for detailed interface requirements.

OND: FLT 5A.1 -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/26/01

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 08/15/00

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2700 - COMMUNICATION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	544849	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	02/06/02
		INITIAL DATE:	04/30/98
ITEM NUMBER:	HT4GK	DATE LAST CHANGED:	12/10/02
SECTION:	2700	TIME LAST CHANGED:	10:56:11

REQUESTER:	MSFC	JSC			
TEST CODE:	CORE	FLT 3A			
TRACKING NO.	S008-1	S01-02-2	S02-02-1	S804-1	S905-1
	S910-1	S912-1			

1. DESCRIPTION: MULTI-ELEMENT INTEGRATION TEST (MEIT) AT KSC-SSPF

a. A 192 / 12 kbps, synchronous, serial bit-stream data and clock service from KSC-SSPF to JSC-SSCC shall be provided for the transfer of test S-band return data. The high and low data rates will not be required simultaneously.
b. A 72 / 6 kbps, synchronous, serial bit-stream data and clock service from JSC - SSCC to KSC - SSPF shall be provided for the transfer of test S-Band forward link data. The high and and low data rates will not be required simultaneously.
c. A 192 / 12 kbps, synchronous, serial bit-stream data and clock service from WSC to SSCC shall be provided for the transfer of test S-Band downlink telemetry. The high and low data rates will not be required simultaneously.
d. A 72 / 6 kbps, synchronous, serial bit-stream data and clock service from SSCC to WSC shall be provided for the transfer of test S-Band uplink data. The high and low data rates will not be required simultaneously.
e. A 192 / 12 kbps, synchronous, serial bit-stream data and clock service from WSC to HOSC shall be provided for the transfer of test S-Band downlink telemetry. The high and low data rates will not be required simultaneously.
f. A NISN Mission Critical Service is required.
g. SSCC and HOSC Mission Critical Systems/SER level interface is required.
h. The maximum bit error rate shall be 10E-6.
i. The data transport delay shall not exceed 600ms.
j. In support of MEIT testing, a relay from KSC to TDRS maybe required.
k. The following voice services shall be provided for support of MEIT testing.

CONTINUED

[PRD] DATABASE RECORD: 544849
ITEM NUMBER: HT4GK

GSFC to KSC Test Coordination	1 circuit	routine
GSFC to WSC Test Coordination	1 circuit	routine
GSFC to JSC Test Coordination	2 circuits	routine
GSFC to MSFC Test Coordination	1 circuit	routine

OND: FLIGHT 3A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOCMT SEE RESPONSE RESPONSE DATE: 03/14/02
RESPONSE: Future MEIT testing requirements are still being defind as indicated in NPRD Rev.H

SUPPLIER: KSC AGENCY: KSC/PH-B (KENNEDY SPACE CENTER)

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 04/30/01
RESPONSE: REF: a: Data circuit will be provided using NISN circuit established to support ISS requirements from JSC.
REF: b. Data circuit will be provided using NISN circuit established to support ISS requirement JSC.
REF: j. This test coord will be assigned by GSFC COMM Manager when needed.
REF: Items c,d,e,f,g,h,i, and k are not KSC responsibility.

[PRD] DATABASE RECORD: 546327 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 07/20/98
INITIAL DATE: 07/20/98
ITEM NUMBER: T5HT DATE LAST CHANGED: 12/10/02
SECTION: 2700 TIME LAST CHANGED: 11:03:03

REQUESTER: JSC
TEST CODE: CORE ESA TEST
TRACKING NO. S807-1

CONTINUED

[PRD] DATABASE RECORD: 546327
ITEM NUMBER: T5HT

1. DESCRIPTION: ESA EARLY COMM REQUIREMENTS

ESA requires the capability to receive 10 voice loops from MSFC via the Interconnection Ground Subnet work (IGS) relay.

One video teleconferencing interface (H.320 standard) is required between the MSFC HOSC and ESA for coordination of planning and operational activities.
One National Television Standard Committee (NTSC) compatible video interface is required to route video from the MSFC HOSC to ESA.

The following circuits are required to support ESA Early Comm:

CIRCUIT	DESTINATION	OND
1-64Kbps (VOICE)	HOSC to ESA	FLT 1A -4 MONTHS
2-384Kbps (VIDEO)	HOSC to ESA	FLT 1A -4 MONTHS
1-168Kbps (TReK)	HOSC to ESA (NOTE 1)	FLT 1A -4 MONTHS

NOTE: 1. This circuit is required to route Telescience Resource Kit (TReK) workstation data from the MSFC HOSC to ESA.
2. Funding for these requirements is provided by NISN and ESA.

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 07/20/98

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 07/20/98

[PRD] DATABASE RECORD: 556452 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 08/14/00
INITIAL DATE: 08/14/00
ITEM NUMBER: T7 DATE LAST CHANGED: 02/12/04
SECTION: 2700 TIME LAST CHANGED: 15:22:49

REQUESTER: JSC

CONTINUED

[PRD] DATABASE RECORD: 556452
ITEM NUMBER: T7

TEST CODE: CORE INFO
TRACKING NO. S008-1

1. DESCRIPTION: SSCC AND JAXA INTERFACE

The SSCC to/from JAXA data transfer interface will be located at the JAXA gateway at the SSCC. Exact details of the data/voice/video requirements of the interface are documented in the SSCC to JAXA Ground Segment ICD (SSP 45012). JAXA will provide the communications services from the SSCC gateway to JAXA facilities.

REF: T37GT Section 2734 DBR 551503

[PRD] DATABASE RECORD: 556453 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 08/14/00
INITIAL DATE: 08/14/00
ITEM NUMBER: H8 DATE LAST CHANGED: 02/12/04
SECTION: 2700 TIME LAST CHANGED: 15:22:49

REQUESTER: MSFC
TEST CODE: INFO
TRACKING NO. S008-1

1. DESCRIPTION: HOSC AND JAXA INTERFACE

The HOSC to/from JAXA data transfer interface will be located at the JAXA gateway at the HOSC annex. Exact details of the data/voice/ video requirement of the interface that will be documented in the NPRD are TDB. JAXA will provide the communications services from the HOSC gateway to JAXA facilities.

[PRD] DATABASE RECORD: 556505 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 08/15/00
INITIAL DATE: 08/15/00
ITEM NUMBER: T9 DATE LAST CHANGED: 08/02/02
SECTION: 2700 TIME LAST CHANGED: 14:42:13

REQUESTER: JSC

CONTINUED

[PRD] DATABASE RECORD: 556505
ITEM NUMBER: T9

TEST CODE: CORE INFO
TRACKING NO. S008-1

1. DESCRIPTION: SSCC AND ESA INTERFACE

The SSCC to /from ESA data transfer will be located at the ESA gateway at the SSCC. Exact details of the data/voice/video requirements of the interface are documented in the SSCC to ESA Ground Segment ICD (SSP 45011). ESA will provide the communications services from the SSCC gateway to ESA facilities.

REF: ITEM T37GT ISO2734 DBR 551503

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2710 - AIR/GROUND VOICE COMMUNICATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	533551	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	02/11/02
		INITIAL DATE:	08/23/96
ITEM NUMBER:	T1GX	DATE LAST CHANGED:	12/10/02
SECTION:	2710	TIME LAST CHANGED:	14:56:51

REQUESTER: JSC
TEST CODE: CORE FLT 2R
TRACKING NO. S002-2 S01-02-2 S01-06-1 S02-02-1 S609-1
S804-1 S808-1 S905-1

1. DESCRIPTION: VHF VOICE

Communications services shall be provided between SSCC and MCC-H, MCC-M and the VHF ground stations located at Dryden Flight Research Center, the White Sands Complex, and Wallops Flight Facility Tracking Station for the bi-directional transmission of voice. Additionally, a VHF site voice coordination loop interconnecting the control centers, communications facilities, and the VHF ground stations is required.

The capability is required to uplink and downlink Space-to-Ground VHF analog voice communications between the MCC-H, MCC-M, ISS and Soyuz via Dryden Flight Research Center (DFRC), Wallops Flight Facility (WFF), and the White Sands Complex (WSC) ground stations as scheduled.

The Service Module (SM) VHF-1 voice/packet data downlink frequency is 143.625mhz and the uplink frequency is 139.208mhz. The modulation is FM with a deviation of plus or minus 10 kHz. Support passes will be scheduled on request.

In addition to normal uplink/downlink support of (SM) VHF-1, the sites are required to provide downlink receive capability on Soyuz-TM VHF-2 at a frequency of 121.750 MHz. Uplink capability on VHF-2 at a frequency of 130.167 MHz is for emergency use only.

VHF 1 and VHF 2 support at DFRC, WFF, and WSC will be on a 4 hour call up and scheduled incase of Soyuz or ISS spacecraft emergency. Operator proficiency passes will be scheduled as needed(approximately 6 passes per year per site). VHF 2 support will be scheduled after each Soyuz launch, two Soyuz launches are projected per year. Approximately 6 passes per launch will be scheduled as follows: 3 at WLPS, 2 at WSC, and 1 at DFRC.

All view period support from Wallops, White Sands and Dryden on ISS

CONTINUED

[PRD] DATABASE RECORD: 533551
ITEM NUMBER: T1GX

VHF 1 and Soyuz VHF 2 is required during any Soyuz or ISS spacecraft emergency for the duration of ISS operations.

REF: ITEM T9GT SECTION ISO2750 DBR 558566

OND: FLT 2R -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 03/14/02
RESPONSE: WFF and WSC requires 24 notification. Less than 24 hours will be scheduled through the WFF shift supervisor at (804 824-2375) and WSC at (505 527-7157) on a best effort basis.

SUPPLIER: DFRC AGENCY: DFRC/XOS (X - DRYDEN FLIGHT RESEARCH CENTER)
SUBSUPPLIER: FD

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 02/25/02
RESPONSE: Dryden will provide VHF voice 5 days a week, 8 hours a day. Hours of operation will be normal duty hours from 0730-1600 PST. Emergency/contingency support outside these hours will provide on an 3 hours best effort basis.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2730 - VOICE NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533567 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T1GHT DATE LAST CHANGED: 03/10/03
SECTION: 2730 TIME LAST CHANGED: 13:18:24

REQUESTER: JSC
SUBREQUESTER: ZTM
TEST CODE: CORE
TRACKING NO. S008-1 S01-02-2 S01-05-3 S02-02-1 S03-01-1
S609-1 S804-1 S905-1 S910-1 S912-1

1. DESCRIPTION: VOICE CIRCUITS REQUIREMENT

NISN shall provide voice communications services for voice communications between the SSCC, HOSC, NASA Centers, and the International Partner (IP) for the following locations.

CIRCUITS	DESTINATION		OND
120 CKTS	SSCC to HOSC (Mission,Sim Supt)	(NCHD)	FLT 5A.1 -8 months
5 CKTS	SSCC to HOSC (JSC TCS support)	(NCHD)	FLT 5A.1 -5.5 months
5 CKTS	SSCC to HOSC (PAO support)	(NCHD)	FLT 2A -6 months
7 CKTS	SSCC to GSFC (Miss,Sim Supt)	(NCHD))	FLT 1A -6 months
31 CKTS	SSCC to CSA (Miss,Sim Supt)	(NCHD)	FLT 6A -6 months
14 CKTS	SSCC to MCC-M (Miss,Sim Supt)	(Critical)	FLT 2A -6 months
34 CKTS	SSCC to MCC-M (Miss,Sim Supt)	(NCHD)	FLT 2A -6 months
1 CKTS	HOSC to GSFC (Mission Supt)	(NCHD)	FLT 5A.1 -10 months
24 CKTS	HOSC to ARC TSC (Miss,Sim Supt)	(NCHD)	FLT UF-1 -10 months
48 CKTS	HOSC to GRC TSC (Miss,Sim Supt)	(NCHD)	FLT 5A.1 -9 months
18 CKTS**	HOSC to UoA/Birmingham	(NCHD)	FLT 5A.1 - 3.75
3 CKTS	HOSC to RSA via SSCC	(NCHD)	FLT 5A.1 - 8 months
18 CKTS**	HOSC to Ottawa,Ontario Canada	(NCHD)	UF-1 - 6 months

**A full duplex data circuit is required to extend voice loops via EVoDS.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

CONTINUED

[PRD] DATABASE RECORD: 533567
ITEM NUMBER: T1GHT

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/11/03

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/30/03

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533557 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T1GT DATE LAST CHANGED: 02/28/03
SECTION: 2734 TIME LAST CHANGED: 14:51:03

REQUESTER: JSC
TEST CODE: CORE FLT 6A
TRACKING NO. S008-1 S01-02-2 S03-01-1 S609-1 S804-1
S905-1 S910-1

1. DESCRIPTION: DATA TRANSFER INTERFACE FOR SSCC TO CSA

NISN shall provide a NASA Operational WAN communications service for communications between the SSCC and the CSA gateway in St-Hubert. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: realtime telemetry, planning data files, file transfer (uplink and downlink), and archived ISS Systems data.

Requirements for SSCC to CSA data transfer interface are as follows:

a. CIR of 256 kbps shall be provided for the transfer of uplink, downlink, planning, archive, and ground-to-ground data files.
b. CIR of 384 kbps shall be provided for the transfer of ISS systems telemetry.
c. A NISN Mission Critical Service (for a and b) is required.
d. A SSCC and CSA Mission Critical Systems/MSN security level interface is required.
e. The one way data transport delay shall not exceed 600 ms (for a and b).
f. The maximum numbers for packet loss is less than .001 percent (for a and b).
g. A CIR of 384 kbps shall be provided for transfer of Remote Multi-Purpose Support Room (RMPSR) Robotic video.
h. A NISN PIP service (for g) is required.
i. Refer to the SSCC to CSA Ground Segment ICD (SSP 45004) for detailed interface requirements.

OND: FLIGHT 6A -6 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

CONTINUED

[PRD] DATABASE RECORD: 533557
ITEM NUMBER: T1GT

RESPONSE: Awaiting funding approval.

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/30/03

[PRD] DATABASE RECORD: 533558 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/30/03
INITIAL DATE: 08/23/96
ITEM NUMBER: T2G DATE LAST CHANGED: 02/28/03
SECTION: 2734 TIME LAST CHANGED: 14:40:04

REQUESTER: JSC
TEST CODE: CORE FLT 6A
TRACKING NO. S008-1 S01-02-2 S03-01-1 S609-1 S804-1
S905-1 S910-1

1. DESCRIPTION: DATA TRANSFER INTERFACE FOR CSA TO SSCC

NISN shall provide a NASA operational WAN communications service, for communications between the CSA and the SSCC gateway in St-Hubert. This WAN service, utilizing TCP/IP protocol suite, will transport the following data.

Requirements for CSA to SSCC data transfer interface are as follows:

a. CIR of 50 kbps shall be provided for the transfer of ISS Systems telemetry requests
b. CIR of 256 kbps shall be provided for the transfer of uplink, downlink, planning, archive, and ground-to-ground data files.
c. A NISN Mission Critical Service is (for a and b)required.
d. A SSCC and CIS Mission Critical Systems/MSN security level interface is required.
e. The one way data transport delay shall not exceed 600ms (for a and b).

CONTINUED

[PRD] DATABASE RECORD: 533558
ITEM NUMBER: T2G

f. The maximum numbers for packet loss is less than .001 percent (for a and b).
g. A CIR of 384 kbps shall be provided for transfer of RMPSR Robotic video.
h. A NISN PIP service (for g) is required.
i. Refer to the SSCC to CSA Ground Segment ICD (SSP 45004) for detailed interface requirements.

OND: FLIGHT 6A -6 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03
RESPONSE:

[PRD] DATABASE RECORD: 533560 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/06/02
INITIAL DATE: 08/23/96
ITEM NUMBER: T3GT DATE LAST CHANGED: 01/30/03
SECTION: 2734 TIME LAST CHANGED: 16:25:50

REQUESTER: JSC
TEST CODE: CORE FLT 1A
TRACKING NO. S008-1 S01-02-2 S02-02-1 S609-1 S610-1
S804-1 S905-1

1. DESCRIPTION: DATA TRANSFER INTERFACE FOR SSCC TO MCC-M

NISN shall provide a NASA Operational WAN communications service for communications between the SSCC and the MCC-M gateway. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types for both real-time and simulations: Shuttle data, ECS command and telemetry, SM health and status, trajectory data, ISS commands (payload and core), ISS command responses, command history data files, real-time and recorded telemetry, planning data files, file transfers (uplink and downlink), and archived ISS Systems data.

CONTINUED

[PRD] DATABASE RECORD: 533560
ITEM NUMBER: T3GT

Mission data flowing between the MCC-H and MCC-M has been categorized by mission criticality as being either Mission Critical or Mission non-critical. Negotiated agreement with NISN to modify bandwidth and availability requirements for each category is defined below; however reliability and packet loss remain as documented in Appendix B for Mission Critical Services.

Requirements for SSCC to MCC-M data transfer interface are as follows:

1.a. A Real-time Mission Critical 640 kbps data interface shall be provided to transport the following data services with a maximum restoral time of less than 15 minutes.
Preplanned FGB and SM commands, command responses, spacecraft, downlink, command history, and planning.
1. Data, uplink, archive and ground-to-ground files.
2. EIS Realtime commands.
3. Russian Orbiting Segment (ROS)CCSDS packet telemetry.
4. Processed Shuttle telemetry.
5. ISS Systems telemetry.
6. PPCP and transport messages.

b. A NISN Real-time Critical Service is required.
c. A SSCC and MCC-M Mission Critical Systems/MSN security level interface is required.
d. The one way data transport delay shall not exceed 700 ms.
e. The maximum acceptable packet loss is .001 percent.

2.a. A Mission Non-Critical 640 kbps data interface shall be provided to transport the following data files with a maximum restoral time of less than 3 hours.
1. General File Transfer (planning, trajectory, flight control, security).
2. Houston Support Room (HSR) telemetry.
3. HSR general file exchange.
4. HSR remote administration.
5. HSR remote baseline update.

b. A NISN Mission Critical Service is required.
c. A SSCC and MCC-M Mission Critical Systems/MSN security level interface is required.

3. Ref to the SSCC to RSA Ground Segment ICD (SSP 50057) for detailed interface requirements.

CONTINUED

[PRD] DATABASE RECORD: 533560
ITEM NUMBER: T3GT

OND: FLIGHT 1A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 10/03/02

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/06/02

[PRD] DATABASE RECORD: 533561 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 05/21/01
INITIAL DATE: 08/23/96
ITEM NUMBER: T4G DATE LAST CHANGED: 12/10/02
SECTION: 2734 TIME LAST CHANGED: 15:19:52

REQUESTER: JSC
TEST CODE: CORE FLT 1A
TRACKING NO. S008-1 S01-02-2 S01-05-5 S609-1 S610-1
S804-1 S905-1 S910-1 S912-1

1. DESCRIPTION: DATA TRANSFER INTERFACE FOR MCC-M TO SSCC

NISN shall provide a NASA Operational WAN communications service for communications between the MCC-M and the SSCC gateway. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types for both realtime and simulations: Shuttle data, ECS command and telemetry, SM health and status, trajectory data, ISS commands (payload and core), ISS command responses, command history data files, realtime and recorded telemetry, planning data files, file transfer (uplink and downlink), and archived ISS Systems data. Mission data flowing between the MCC-M and MCC-H has been categorized by mission criticality as being either Mission Critical or Mission Non-Critical. Negotiated agreement with NISN to modify bandwidth and availability requirements for each category is defined below; however, reliability and packet loss remain as documented in Appendix B for Mission Critical Services.

CONTINUED

[PRD] DATABASE RECORD: 533561
ITEM NUMBER: T4G

Requirements for MCC-M to SSCC data transfer interface are as follows:

1.a. Real-time Mission Critical 640 kbps data interface shall be provided to transport the following data services with a maximum restoral time of less than 15 minutes:
   1. Shared multi-segment command data.
   2. Command Express reports.
   3. Russian Segment (RS) commands.
   4. Real-time United States On-Orbit Segment (USOS) telemetry.
   5. Transfer of recorded USOS data.
   6. Transfer of uplink, downlink, planning, and ground-to-ground data files.

   b. A NISN Real-time Critical Service is required.
   c. A SSCC and MCC-M Mission Critical Systems/MSN security level interface is required.
   d. The one way data transport delay shall not exceed 700 ms.
   e. The maximum acceptable packet loss is .001 percent.

2.a. A Mission Non-Critical 640 kbps data interface shall be provided to transport the following dta files with a maximum restoral time of less than 3 hours.
   1. Moscow Support Room (MSR) telemetry.
   2. MSR general file exchange.
   3. MSR remote administration.
   4. MSR remote baseline update.

   b. A NISN Mission Critical Service is required.
   c. A MCC-M and SSCC Mission Critical Systems/MSN security level interface is required.

3. Refer to the SSCC to RSA Ground Segment ICD (SSP 50057) for detailed interface requirements.

OND: FLIGHT 1A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/06/01

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 533561
ITEM NUMBER: T4G

[PRD] DATABASE RECORD: 538278 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/01
INITIAL DATE: 05/21/97
ITEM NUMBER: KT5GKT DATE LAST CHANGED: 12/10/02
SECTION: 2734 TIME LAST CHANGED: 15:22:57

REQUESTER: KSC JSC
SUBREQUESTER: S01-02-2 S705-1
TEST CODE: CORE FLT 2A

1. DESCRIPTION: JSC-SDIL TO KSC-SSPF/PAD DATA TRANSFER INTERFACE

JSC requires 192 Kbps full duplex circuit between the JSC Software Development Integration Laboratory (SDIL) and the KSC Space Station Processing Facility (SSPF)/PAD for the transfer of flight software loads. AIS sensitivity level 3 interface is required, and a non-critical highly desirable data classification for availability and a maximum bit error rate of 10E-6

OND: FLIGHT 2A -10 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/20/01
RESPONSE:

SUPPLIER: KSC AGENCY: KSC/PH-B3B (K - KENNEDY SPACE CENTER)
SUBSUPPLIER: USK-102

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/30/01

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/08/01

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD:	544851	REQUIREMENT STATUS:	APPROVED R
DOCUMENT ID:	ISS VOL-I	APPROVAL DATE:	02/08/02
		INITIAL DATE:	05/01/98
ITEM NUMBER:	HT6GT	DATE LAST CHANGED:	01/30/03
SECTION:	2734	TIME LAST CHANGED:	16:26:50

REQUESTER:	MSFC	JSC				
TEST CODE:	CORE	FLT 5A.1				
TRACKING NO.	S008-1	S01-02-2	S02-02-1	S804-1	S905-1	S910-1

1. DESCRIPTION: SSCC TO HOSC DATA TRANSFER INTERFACE

NISN shall provide a NASA Operational WAN communications service for communications between the SSCC and the HOSC. This WAN service, utilizing the Transmission Control Protocol/Internet Protocol (TCP/IP) suite of protocols, will transport the following data types: commands (payload and core), command responses, command history data files, planning data files, uplink file transfers, archived ISS Systems data, and archive requests. NISN shall provide a serial bit-stream service for the transmission of simulated S-Band downlink telemetry. These dta types are identified below as either operational or simulation requirements.

a. CIR of 112 kbps shall be provided for the transfer of operational and simulated command responses via a dedicated point to point circuit or equivalent dedicated private network.
b. CIR of 112 kbps shall be provided for the transfer of operational and simulated command history files.
c. CIR of 192 kbps shall be provided for the transfer of planning data files.
d. CIR of 150 kbps shall be provided for the transfer of archived ISS Systems data files.
e. CIR of 192 kbps, synchronous, serial bit-stream data and clock service shall be provided for the transfer of downlink S-band downlink telemetry.
f. A CIR of 4 kbps shall be provided for the transfer of real-time and simulated IAM antenna. FLT 5A.1 -3.5 months
g. Two ISDN circuit with BRI of 128 Kbps each shall be provided for the transfer of Orbiter Communications Adapter (OCA) data. OND: FLT 5A.1-2.5
h. A NISN Mission Critical Service (for a through f) is

CONTINUED

[PRD] DATABASE RECORD: 544851
ITEM NUMBER: HT6GT

required.

i. SSCC and HOSC Mission Critical Systems/MSN security level interface is required.
j. The one way data transport delay (for a through f) shall not exceed 100ms.
k. The maximum acceptable packet loss (for a through f) is .001 percent.
l. Refer to the SSCC to HOSC ICD (SSP 45001) for detailed interface requirements.

OND: FLT 5A.1 -11 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/08/02

[PRD] DATABASE RECORD: 544853 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/02
INITIAL DATE: 05/01/98
ITEM NUMBER: HT7GH DATE LAST CHANGED: 12/10/02
SECTION: 2734 TIME LAST CHANGED: 15:53:05

REQUESTER: MSFC JSC
TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S01-02-2 S02-02-1 S804-1 S905-1
S910-1

1. DESCRIPTION: HOSC TO SSCC DATA TRANSFER INTERFACE

NISN shall provide a NASA Operational WAN communications service for communications between the SSCC and the HOSC. This WAN service, utilizing the Transmission Control Protocol/Internet Protocol (TCP/IP) suite of protocols, will transport the following data types: commands (payload and core), command responses, command history data files, planning data files, uplink file transfers, archived ISS Systems data,

CONTINUED

[PRD] DATABASE RECORD: 544853
ITEM NUMBER: HT7GH

and archive requests. NISN shall provide a serial bit-stream service for the transmission of simulated S-Band downlink telemetry. These data types are identified below as either operational or simulation requirements.

a. CIR of 112 kbps shall be provided for the transfer of operational and simulated commands via a dedicated point to point circuit or equivalent dedicated private network.
b. CIR of 300 kbps shall be provided for the transfer of operational and simulated uplink files.
c. CIR of 192 kbps shall be provided for the transfer of planning data files.
d. CIR of 1 kbps shall be provided for the transfer of archive requests.
e. Two ISDN circuits with a BRI of 128 kbps each shall be provided for the transfer of Orbiter Communications Adapter (OCA) data. OND: FLT 5A.1 -2.5 months
f. A NISN Mission Critical Service (for a through d) is required.
g. A SSCC and HOSC Mission Critical Systems/MSN security level.
h. The one way data transport delay shall not exceed 100 ms (for a through d).
i. The maximum acceptable packet loss is .001 percent (for a through d).
j. Refer to the SSCC to HOSC ICD (SSP 45001) for detailed interface requirements.

OND: FLT 5A.1 11 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 544857 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/28/03
INITIAL DATE: 05/01/98
ITEM NUMBER: HT8G DATE LAST CHANGED: 02/28/03
SECTION: 2734 TIME LAST CHANGED: 14:55:20

REQUESTER: MSFC JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S01-02-2 S02-02-1 S804-1 S910-1
S912-1

1. DESCRIPTION: DSMC INTERFACE

Communications interfaces between the SSCC, the HOSC and the DSMC shall be provided. Refer to the 530-ICD-NCCDS-MOC and Annex 2 and 10 for detailed interface requirements.

OND: FLIGHT 2A -6 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

[PRD] DATABASE RECORD: 545082 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/02
INITIAL DATE: 05/05/98
ITEM NUMBER: HT17G DATE LAST CHANGED: 01/30/03
SECTION: 2734 TIME LAST CHANGED: 16:33:25

REQUESTER: MSFC JSC
TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S01-02-2 S02-02-1 S804-1 S910-1

1. DESCRIPTION: SPACE STATION TRAINING FACILITY (SSTF) TO HOSC
DATA TRANSFER INTERFACE

NISN shall provide a NASA Operational WAN communications service for communications between the SSTF and the HOSC. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: simulated payload health and status data and Instructor Station (IS) Training Session Data Stream.

a. A circuit of 256 kbps shall be provided for the transfer of

CONTINUED

[PRD] DATABASE RECORD: 545082
ITEM NUMBER: HT17G

simulated payload Health and Status data.

b. A circuit of 1.1 Mbps shall be provided for the transfer of IS Training Session Data.
c. A CIR of 100 kbps shall be provided for the transfer of simulated S-band telemetry data.
d. A NISN Mission Critical service is required.
e. A SSTF and HOSC Mission Critical Systems/SER security level interface is required.
f. The one way data transport delay shall not exceed 100 ms.
g. The maximum acceptable packet loss is .001 percent.
h. Refer to the SSTF to MSFC POIC and Remote Area for Payload Support (RAPS) ICD (SSP 50088) for detailed interface requirements.

OND: FLIGHT 5a.1 -11 MONTHS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02
RESPONSE:

[PRD] DATABASE RECORD: 545083 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/02
INITIAL DATE: 05/05/98
ITEM NUMBER: HT18G DATE LAST CHANGED: 01/30/03
SECTION: 2734 TIME LAST CHANGED: 16:34:37

REQUESTER: MSFC JSC
TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S01-02-2 S02-02-1 S804-1 S910-1

1. DESCRIPTION: HOSC TO SSTF DATA TRANSFER INTERFACE

NISN shall provide a NASA Operational WAN communications service for communications between the HOSC and the SSTF. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: simulated payload health and status data and (IS) Training

CONTINUED

[PRD] DATABASE RECORD: 545083
ITEM NUMBER: HT18G

Session Data Stream.

a. A CIR of 1.4 Mbps shall be provided for the transfer of Remote Area for Payload Support (RAPS) data and Instructor Operator Station (IS) Training Session data.
b. A CIR of 100kbps shall be provided for the transfer of S-band command data.
c. A NISN Mission Critical service is required.
d. A SSTF and HOSC Mission Critical Systems/SER security level interface is required.
e. The one way data transport delay shall not exceed 100ms.
f. The maximum acceptable packet loss is .001 percent.
g. Refer to the SSTF to MSFC POIC and RAPS ICD (SSP 50088) for detailed interface requirements.

OND: FLT 5A.1 - 11 mo.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02
RESPONSE:

[PRD] DATABASE RECORD: 551497 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/31/03
INITIAL DATE: 05/04/99
ITEM NUMBER: HT31G DATE LAST CHANGED: 02/28/03
SECTION: 2734 TIME LAST CHANGED: 15:21:10

REQUESTER: MSFC JSC
TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S01-02-2 S02-02-1 S03-01-1 S905-1
S910-1

1. DESCRIPTION: JSC TSC TO HOSC DATA TRANSFER INTERFACE

NISN shall provide a WAN communications service for communications between the JSC TSC and the HOSC. This WAN service, utilizing TCP/IP

CONTINUED

[PRD] DATABASE RECORD: 551497
ITEM NUMBER: HT31G

protocol suite, will transport the following data types: Real-time data, COR Dump of real-time data, LOR P/B of real time, LOR P/B of COR Dump, PIMS data, GSE packet definition and distribution, OCMS data, telemetry services and commanding services.

The X-windows interface requires a CIR of 56 Kbps for each active session (screen which is continually updating). The X-windows interface

requires a CIR of 56 Kbps for the combined non-active sessions.

a. A CIR of 1,544Mbps shall be provided for the transfer of X-window commands, commands responses, PIMs data, PPS data, and uplink file transfer. OND: FLT 5A.1-9.5 months.
b. A NISN Premium service is required.
c. A HOSC and JSC Mission Critical Systems/SER security level interface is required.
d. The one way data transport delay shall not exceed 100ms.
e. The maximum acceptable packet loss is 1 percent.
f. Refer to the POIC to Generic User IDD (SSP 50305) for detailed interface requirements.

OND: FLT 5A.1 - 9.5 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03
RESPONSE:

[PRD] DATABASE RECORD: 551498 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/31/03
INITIAL DATE: 05/04/99
ITEM NUMBER: T32GH DATE LAST CHANGED: 02/28/03
SECTION: 2734 TIME LAST CHANGED: 15:21:42

REQUESTER: JSC

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 551498
ITEM NUMBER: T32GH

TEST CODE: CORE FLT 5A.1
TRACKING NO. S008-1 S01-02-2 S02-02-1 S03-01-1 S905-1
S910-1

1. DESCRIPTION: HOSC TO JSC TSC DATA TRANSFER INTERFACE

NISN shall provide a WAN communications service for communications between the HOSC and the JSC TSC. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: Real-time data, COR dump or real-time data, LOR P/B of real-time data, LOR P/B of COR dump, PIMS data, PPS data, GSE packet definition and distribution, OCMS data, telemetry services and commanding services.

The X-windows interface requires a CIR of 56 Kbps for each active session (screen which is continually updating). The X-window interface requires a CIR of 56Kbps for the combined non-active sessions.

a. A CIR of7.544 Mbps shall be provided for the transfer of real-time payload experiment data, stored payload experiment data, payload health and status data, ground ancillary data, downlink file transfers, GSE subset, X-window session data, and custom data packets.
b. A NISN Premium service is required.
c. A HOSC and JSC Mission Critical Systems/SER security level interface is required.
d. The one way data transport delay shall not exceed 100ms.
e. The maximum acceptable packet loss is 1 percent
f. Refer to the POIC to Generic User IDD (SSP 50305) for detailed interface requirements.

OND: Flight 5A.1 - 9.5 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

CONTINUED

[PRD] DATABASE RECORD: 551498
ITEM NUMBER: T32GH

RESPONSE:

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOCMT SEE RESPONSE RESPONSE DATE: 02/11/03
RESPONSE: This requirement is documented in the ISS Vol II Utilization PRD and should be deleted from the Vol-I PRD.

[PRD] DATABASE RECORD: 551501 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/02
INITIAL DATE: 05/05/99
ITEM NUMBER: KT35GT DATE LAST CHANGED: 08/05/02
SECTION: 2734 TIME LAST CHANGED: 08:51:48

REQUESTER: KSC JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S02-02-1 S905-1 S910-1

1. DESCRIPTION: JSC TO KSC DATA TRANSFER INTERFACE

NISN shall provide a NASA Operational WAN communications service for communications between the JSC and the KSC. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: software loads, file transfers.

a. A CIR of 192 Kbps shall be provided for the transfer of flight software loads from the Software Development Integration Laboratory (SDIL) to the Space Station Processing Facility (SSPF).
b. A CIR of 224kbps shall be provided for the Test Control and Monitor System (TCMS) from the ASI Gateway at JSC to the SSPF.
c. A SDIL and SSPF Mission Critical Systems/MSN security level interface is required.
d. A JSC and SSPF Mission Critical Systems/SER security level interface is required for (b.).

CONTINUED

[PRD] DATABASE RECORD: 551501
ITEM NUMBER: KT35GT

e. A NISN Mission Critical Service is required for (a.).
f. A NISN Premium Service is required for (b.).

REF: ITEM TK5GKT ISO 2734 DBR 538278

OND: FLT 2A - 10 mos.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02
RESPONSE:

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/08/02

[PRD] DATABASE RECORD: 551502 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/02
INITIAL DATE: 05/05/99
ITEM NUMBER: T36GK DATE LAST CHANGED: 01/31/03
SECTION: 2734 TIME LAST CHANGED: 11:31:16

REQUESTER: JSC
TEST CODE: CORE FLT 2A
TRACKING NO. S008-1 S02-02-1 S905-1

1. DESCRIPTION: KSC TO JSC DATA TRANSFER INTERFACE

NISN shall provide a NASA Operational WAN communications service for communications between the KSC and the JSC. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: software loads, file transfer.

a. A CIR of 192 Kbps shall be provided for the transfer of flight software loads from the SSPF to SDIL.
b. A CIR of 512kbps shall be provided for the Test Control and Monitor System (TCMS) from the SSPF to

CONTINUED

[PRD] DATABASE RECORD: 551502
ITEM NUMBER: T36GK

the ASI Gateway at JSC.

c. A CIR of 384kbps shall be provided for compressed video from the SSPF to the ASI Gateway at JSC.
d. A NISN Mission Critical Service is required for (a.).
e. A NISN Premium Service is required for (b and c).
f. A SSPF and SDIL Mission Critical Systems/MSN security level interface is required for (a.).
g. A SSPF and JSC Mission Critical Systems/SER security level interface is required for (b and c).

REF: ITEM TK5GKT ISO2734 DBR 538278

OND: FLT 2A - 10 mos.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02
RESPONSE:

SUPPLIER: KSC AGENCY: KSC/PZ-H-C (K - KENNEDY SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/30/02

[PRD] DATABASE RECORD: 551503 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 08/16/00
INITIAL DATE: 05/05/99
ITEM NUMBER: T37GT DATE LAST CHANGED: 10/03/02
SECTION: 2734 TIME LAST CHANGED: 16:06:09

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S008-1 S905-1 S910-1

1. DESCRIPTION: SSCC TO ESA INTERFACE

The SSCC to/from ESA data transfer interface will be located at the

CONTINUED

[PRD] DATABASE RECORD: 551503
ITEM NUMBER: T37GT

ESA gateway at the SSCC.

a. A CIR of 512 Kbps shall be provided for the transfer of spacecraft telemetry.
b. A SSCC and ESA Mission Critical Systems/MSN security level interface in required.
c. The one way data transport delay shall not exceed TBD ms.
d. The maximum acceptable packet loss is 1 percent.
e. Refer to the SSCC to ESA ICD (SSP 45011) for detailed interface requirements.

OND: TBS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 10/03/02

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 08/16/00

[PRD] DATABASE RECORD: 551504 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/09/01
INITIAL DATE: 05/05/99
ITEM NUMBER: T38GT DATE LAST CHANGED: 07/03/02
SECTION: 2734 TIME LAST CHANGED: 08:10:50

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S01-02-2 S905-1 S910-1

1. DESCRIPTION: ESA TO SSCC INTERFACE

The SSCC to/from ESA data transfer interface will be located at the ESA gateway at the SSCC.

a. A CIR of 512 Kbps shall be provided for the transfer of file transfers.
b. A SSCC and ESA Mission Critical Systems/MSN security level

CONTINUED

[PRD] DATABASE RECORD: 551504
ITEM NUMBER: T38GT

interface is required.
c. The one way data transport delay shall not exceed TBD ms.
d. The maximum acceptable packet loss is 1 percent.
e. Refer to the SSCC to ESA ICD (SSP 45011) for detailed interface requirements.

OND: TBS

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/20/01

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/09/01

[PRD] DATABASE RECORD: 553557 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/09/01
INITIAL DATE: 11/05/99
ITEM NUMBER: T40G DATE LAST CHANGED: 01/31/03
SECTION: 2734 TIME LAST CHANGED: 11:32:09

REQUESTER: JSC
SUBREQUESTER: GRC
TEST CODE: CORE
TRACKING NO. S01-02-2 S911-1 S912-1

1. DESCRIPTION: HOSC AND GRC TSC INTERFACE

NISN shall provide a WAN communications service for communications between the HOSC and the GRC TSC. This WAN service, utilizing TCP/IP protocol suite, will transport the following data types: Real-time data, COR dump of real-time data, LOR P/B or real-time data, LOR P/B of COR dump, PIMS data, PPS data, GSE packet definition and distribution, OCMS telemetry services, and command services.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

CONTINUED

[PRD] DATABASE RECORD: 553557
ITEM NUMBER: T40G

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/20/01

[PRD] DATABASE RECORD: 553558 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/12/01
INITIAL DATE: 11/05/99
ITEM NUMBER: H41GH DATE LAST CHANGED: 01/31/03
SECTION: 2734 TIME LAST CHANGED: 11:36:08

REQUESTER: MSFC
TEST CODE: CORE
TRACKING NO. S008-1 S01-02-2 S911-1

1. DESCRIPTION: GRC TSC TO HOSC DATA TRANSFER INTERFACE

The X-Windows interface requires a CIR of 56 kbps for each active session (screen which is continually updating). The X-Windows interface requires a CIR 56Kbps for the combined non-active sessions.

a. A CIR of 1.544 Mbps shall be provided for the transfer of X-windows commands, command responses, PIMS data, PPS data, and uplink fie transfers.
b. A NISN Premium service is required.
c. A HOSC and GRC/TSC Mission Critical System/SER security level interface is required.
d. The one way data transport delay shall not exceed 100 ms.
e. The maximum acceptable packet loss is 1%.
f. Refer to the POIC to Generic User IDD (SSP 50305) for detailed interface requirements.

OND: Flight 5A.1 - 8.5 months

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/20/01

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

CONTINUED

[PRD] DATABASE RECORD: 553558
ITEM NUMBER: H41GH

SUPPLIER COMMITMENT: NOCMT SEE RESPONSE RESPONSE DATE: 03/27/02
RESPONSE: This requirement is documented in the ISS Vol II Utilization PRD and should be deleted from the Vol-I PRD.

[PRD] DATABASE RECORD: 553759 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/31/03
INITIAL DATE: 11/05/99
ITEM NUMBER: H42GH DATE LAST CHANGED: 02/28/03
SECTION: 2734 TIME LAST CHANGED: 15:22:51

REQUESTER: MSFC
SUBREQUESTER: GRC
TEST CODE: CORE
TRACKING NO. S008-1 S01-02-2 S02-02-1 S03-01-1 S911-1

1. DESCRIPTION: HOSC TO GRC TSC DATA TRANSFER INTERFACE

The X-Windows interface requires a CIR of 56 kbps for each session (screen which is continually updating). The X-Windows interface requires a CIR of 56 kbps for the combined non-active sessions.

a. A CIR of 7.278 Mbps shall be provided for the transfer of real-time payload experiment data, stored payload experiment data, payload health and status data, flight ancillary data, ground ancillary data, downlink file transfers, GSE subsets, and custom data packets.
b. A NISN Premium service is required.
c. A HOSC and GRC/TSC Mission Critical System/SER 2 interface is required.
d. The one way data transport delay shall not exceed 100 ms.
e. The maximum acceptable packets loss is 1%.
f. Refer to the POIC and Generic User IDD (SSP 50305) for detailed interface requirements.

OND: Flight 6A.9 months

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 553759
ITEM NUMBER: H42GH

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOCMT SEE RESPONSE RESPONSE DATE: 02/11/03
RESPONSE: This requirement is documented in the ISS Vol II Utilization PRD and should be deleted from the Vol-I PRD.

[PRD] DATABASE RECORD: 556504 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 05/21/01
INITIAL DATE: 08/15/00
ITEM NUMBER: T43GT DATE LAST CHANGED: 01/31/03
SECTION: 2734 TIME LAST CHANGED: 11:42:27

REQUESTER: JSC
TEST CODE: CORE FLT2A
TRACKING NO. S008-1 S01-02-2 S01-05-5 S03-01-1

1. DESCRIPTION: SSCC AN DSMC INTERFACE FOR SCHEDULING TDRSS

Scheduling messages for ISS shall simultaneously share the same communications interface as the Shuttle scheduling messages. The SSCC shall supply conflict-free TDRSS scheduling messages for all ISS elements including ACS, ATV, and HTV.

a. A circuits of 64 kbps between the DSMC and the SSCC shall be provided for TDRSS scheduling messages. This interface shall be full deplex and shall be between the ISS and the SSP Programs.
b. A NISN real-time Critical Service is required.
c. A SSCC and DSMC Mission Critical Systems/MSN security level interface is required.
d. Refer to the 530-ICD-NCCDS-MOC Annex 10 for detailted interfacerequirements.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2734 - VIDEO/DATA NETWORK TRANSMISSION

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 556504
ITEM NUMBER: T43GT

REF: ITEM T3GT SECTION ISO2000 DBR 534320

OND: FLIGHT 2A - 6 months

SUPPLIER: GSFC AGENCY: GSFC/450 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/06/01

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 05/21/01

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 575455 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T1 DATE LAST CHANGED: 02/19/04
SECTION: 2750 TIME LAST CHANGED: 15:24:41

REQUESTER: JSC
TEST CODE: CORE INFO

1. DESCRIPTION: COMMUNICATION ACCESS CONTROL

Those circuits categorized as "Operations Critical" or "Non-Operations Critical" require operational access approval in accordance with NMI 8610.11 prior to documentation in this Station PRD. Prior to submittal of a circuit requirement in the PRD, it is necessary to consult the appropriate Access Controller (identified below) for circuit criticality previously assigned, or for access to circuits not currently documented.

Access approval must be obtained from the cognizant agency prior to any termination being documented in the PRD.

COMMUNICATION ACCESS CONTROLLERS:

JSC/K. JONES/DV
Johnson Space Center
Houston, TX 77058
281 483-7671

GSFC/S. NORMAN/291
Goddard Space Flight Center
Greenbelt, MD 20771
301 286-8676

MSFC/N. HILEY/FD43
Marshall Space Flight Center
Huntsville, AL 35812
256 544-5774

DOD/J. GREENE/DDMS-X
Patrick AFB, FL. 32925-6675
321 494-8581

KSC/M. McLAMB/TA-B2-B
Kennedy Space Center
FL 32899
321 867-8540

NASA HQS/J. TINSLEY/MO
National Aeronautics and Space
Administration
Washington, DC. 20546
202 358-4406

ER/M. GAWEL
45 RANS/DOS
Patrick AFB, FL 32899
321 853-8118

DFRC/R. ROOD/F
NASA Dryden Flight Research Center
P.O. BOX 273
Edwards, CA 93523

CONTINUED

[PRD] DATABASE RECORD: 575455
ITEM NUMBER: T1

661 276-2138

[PRD] DATABASE RECORD: 575456 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/06/04
INITIAL DATE:
ITEM NUMBER: T5 DATE LAST CHANGED: 04/06/04
SECTION: 2750 TIME LAST CHANGED: 14:09:04

REQUESTER: JSC
TEST CODE: CORE INFO

1. DESCRIPTION: STATION COMM NET

NAME	ITEM	COGNIZANT AGENCY	CRITICALITY
1. MOSCOW CIRCUITS	7	JSC & MOSCOW	O/C FULL-TIME
2. ISS OPS	8	JSC	N/C FULL-TIME
3. ISS FD 1	10	JSC	O/C FULL-TIME
4. PAO MOSCOW	11	MOSCOW	N/C FULL-TIME
5. ISSP MGNT COORD	12	JSC	N/C FULL-TIME
6. ISS TN COORD 1	13	GSFC	O/C FULL-TIME
7. CSA CIRCUITS	14	JSC & MSFC	O/C FULL-TIME
8. NISN COMM COORD	15	GSFC	N/C FULL-TIME
9. ALTEC CIRCUITS	16	JSC	N/C
10.RS ISS VHF 1	17	JSC	O/C FULL-TIME
11.RS ISS VHF 2	18	JSC	O/C FULL-TIME
12.ISS SITE COORD	19	GSFC	N/C FULL-TIME
13.ESA CIRCUITS	20	JSC	N/C
14.WSC PLAYBACK	21	GSFC	N/C FULL-TIME
15.1 S/G 1	22	JSC	0/C FULL-TIME
16 1 S/G 2	23	JSC	O/C FULL-TIME
17 TRANS RUS TO ENG	24	JSC	O/C FULL-TIME

[PRD] DATABASE RECORD: 551161 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 05/03/04
INITIAL DATE: 04/06/99
ITEM NUMBER: T7T DATE LAST CHANGED: 05/03/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 551161
ITEM NUMBER: T7T

SECTION: 2750 TIME LAST CHANGED: 14:10:26

REQUESTER: JSC
SUBREQUESTER: ZTM
TEST CODE: CORE FULL-TIME ISS

TRACKING NO.	S002-1	S007-1	S01-02-2	S01-11-1	S011-2
	S02-02-1	S02-10-2	S02-11-1	S03-03-1	S03-04-1
	S03-04-2	S03-09-1	S03-10-2	S03-10-3	S03-11-1
	S04-03-1	S04-05-1	S904-1	S911-1	SO3-03-02

1. DESCRIPTION:

NAME	CAP	CH	FROM	TO	NOTE
A/G 1	T/M	13	JSC	MCC-M	3
A/G 2	T/M	09	JSC	MCC-M	3
R/T EXE COORD	T/M	39	JSC	MCC-M	*
PLAN/STOW COORD	T/M	25	JSC	MCC-M	*
S/T PLN COORD	T/M	26	JSC	MCC-M	*
ISS SYS COORD 1	T/M	27	JSC	MCC-M	*
ISS SYS COORD 3	T/M	29	JSC	MCC-M	
ISS CMD COORD	T/M	40	JSC	MCC-M	*
ISS MER 1	T/M	31	JSC	MCC-M	
HOUSTON SUPPORT	T/M	08	JSC	MCC-M	*
IP/GC 1	T/M	03	JSC	MCC-M	*
FD 1	M	04	JSC	MCC-M	
ISS TLM COORD	T/M	16	JSC	MCC-M	*
CAPCOM COORD 1	T/M	02	JSC	MCC-M	*
ISS OPS	T/M	18	JSC	MCC-M	*
1 S/G 1	T/M	19	JSC	MCC-M	3,*
1 S/G 2	T/M	20	JSC	MCC-M	3,*
ISS FD 1	T/M	22	JSC	MCC-M	*
SURGEON R/T	T/M	10	JSC	MCC-M	*
OCA BFCR	T/M	37	JSC	MCC-M	
ISS SURGEON	T/M	14	JSC	MCC-M	
ISS TRAINING COORD	T/M	15	JSC	MCC-M	
ISS SIM COORD	T/M	32	JSC	MCC-M	
ISS IST	T/M	33	JSC	MCC-M	*
IP CONF	T/M	34	JSC	MCC-M	
2 S/G 1	T/M	35	JSC	MCC-M	
2 S/G 2	T/M	36	JSC	MCC-M	

CONTINUED

[PRD] DATABASE RECORD: 551161
ITEM NUMBER: T7T

MOSCOW PATCH MH38	T/M	38	JSC	MCC-M	4
HSG/RIO COORD	T/M	05	JSC	MCC-M	
MOSCOW PATCH MH06	T/M	06	JSC	MCC-M	4,*
ISS SYS COORD 2	T/M	28	JSC	MCC-M	*
ISS SYS COORD 4	T/M	30	JSC	MCC-M	*
ISS AFD 1	T/M	17	JSC	MCC-M	*
OPS PLAN 1	T/M	41	JSC	MCC-M	2
MOSCOW PATCH MH42	T/M	42	JSC	MCC-M	2,4
TRANS RUS/ENG	T/M	12	JSC	MCC-M	*
FMT COORD 1	T/M	43	JSC	MCC-M	2,*
OPS PLAN SUPT 1	T/M	44	JSC	MCC-M	2
EVA PROCED ISS 1	T/M	45	JSC	MCC-M	2
MOSCOW PATCH MH46	T/M	46	JSC	MCC-M	2,4
MOSCOW PATCH MH47	T/M	47	JSC	MCC-M	2,4
ISS SYSTEM COORD 5	T/M	48	JSC	MCC-M	2
MOSCOW SUPPORT	T/M	07	MOSCOW	MCC-H	
PAO MOSCOW	T/M	11	MOSCOW	MCC-H	
RS FD	M	23	MOSCOW	MCC-H	1,*
RS ISS VHF 1	T/M	21	MOSCOW	MCC-H	*
RS ISS VHF 2	T/M	24	MOSCOW	MCC-H	*
TRANS ENG/RUS	T/M	01	MOSCOW	MCC-H	

NOTE: 1. This circuit will remain in monitor mode until approval has been given for talk mode.
2. To be configured for HSR only.
3. A/G 1 and A/G 2 loops are designated restoration for S/G 1 and S/G 2 during normal ISS, not to interrupt normal shuttle operations.
4. This loop will be configured as required.

NOTE: The circuits with an asterisk (*) routed from JSC to MSFC/POIC in the event of a Backup Command Control (BCC) activation. This will allow the circuits to remain active between MSFC/POIC and MCC-M during BCC activation.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 551161
ITEM NUMBER: T7T

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 05/03/04

[PRD] DATABASE RECORD: 556293 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE: 07/18/00
ITEM NUMBER: GTY8T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:55:06

REQUESTER: GSFC JSC NASA HQ
SUBREQUESTER: HQ
TEST CODE: CORE
TRACKING NO. S007-1 S01-02-2 S03-01-1 S03-09-1

1. DESCRIPTION: ISS OPS

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
G1	M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575458 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY8.1G DATE LAST CHANGED: 02/26/04
SECTION: 2750 TIME LAST CHANGED: 15:09:34

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575458
ITEM NUMBER: GTY8.1G

1. DESCRIPTION: ISS OPS

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	M	EXTEND TO HQ	1
G2	M	EXTEND TO GSFC/NIC	
G3	M	EXTEND TO WSC	

NOTE: 1. Voice loop will be extended to the Action Center for HQ ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/26/04

[PRD] DATABASE RECORD: 575457 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY10T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:58:07

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS FD

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
G1	M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

CONTINUED

[PRD] DATABASE RECORD: 575457
ITEM NUMBER: GTY10T

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575462 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY10.1G DATE LAST CHANGED: 02/26/04
SECTION: 2750 TIME LAST CHANGED: 15:09:56

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS FD

RESPONSIBLY AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	M	EXTEND TO HQ	1
G2	M	EXTEND TO GSFC/NIC	
G3	M	EXTEND TO WSC	

NOTE 1. Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/26/04

[PRD] DATABASE RECORD: 575463 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY11T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 15:00:18

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: PAO MOSCOW

CONTINUED

[PRD] DATABASE RECORD: 575463
ITEM NUMBER: GTY11T

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575464 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY11.1G DATE LAST CHANGED: 02/26/04
SECTION: 2750 TIME LAST CHANGED: 15:10:46

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: PAO MOSCOW

RESPONIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	T/M	EXTEND TO HQ	1
G2	M	EXTEND TO GSFC/NIC	

NOTE: 1. Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/26/04

[PRD] DATABASE RECORD: 575465 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY12T DATE LAST CHANGED: 02/17/04

CONTINUED

[PRD] DATABASE RECORD: 575465
ITEM NUMBER: GTY12T

SECTION: 2750 TIME LAST CHANGED: 15:18:28

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISSP MANAGEMENT COORD

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575466 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GTY12.1G DATE LAST CHANGED: 02/26/04
SECTION: 2750 TIME LAST CHANGED: 15:11:09

REQUESTER: GSFC JSC NASA HQ
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISSP MANAGEMENT COORD

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	T/M	EXTEND TO HQ	1

NOTE: 1. Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/26/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575466
ITEM NUMBER: GTY12.1G

[PRD] DATABASE RECORD: 575467 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GHT13G DATE LAST CHANGED: 02/26/04
SECTION: 2750 TIME LAST CHANGED: 15:11:32

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS TN COORD 1

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO JSC	
G2	T/M	EXTEND TO WSC	
G3	T/M	EXTEND TO NIC	
M4	T/M	EXTEND TO MSFC	

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/26/04

[PRD] DATABASE RECORD: 575476 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GHT13.1T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 15:23:00

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS TN COORD 1

REPSONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO MCC	

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575476
ITEM NUMBER: GHT13.1T

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575477 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: GHT13.2H DATE LAST CHANGED: 02/26/04
SECTION: 2750 TIME LAST CHANGED: 10:01:34

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS TN COORD 1

RESPONSIBLE AGENCY: MSFC

REF	CAP	TERMINATION LOCATION	NOTE
M1	T/M	EXTEND TO HOSC	

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/20/04

[PRD] DATABASE RECORD: 556625 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 08/29/03
INITIAL DATE: 08/21/00
ITEM NUMBER: T14HT DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 13:59:02

REQUESTER: JSC
SUBREQUESTER: CSA GSS OEC PTOC
RMPSR
TEST CODE: CORE
TRACKING NO. S01-02-3 S01-03-2 S01-04-1 S01-05-4 S01-07-1
S01-07-5 S01-08-1 S01-10-1 S011-3 S02-10-1
S03-06-1 S03-08-2 S03-08-3

1. DESCRIPTION: VOICE REQUIREMENT FOR CSA/ESR

CONTINUED

[PRD] DATABASE RECORD: 556625
ITEM NUMBER: T14HT

NOTE: A TOTAL OF 60 VOICE CIRCUITS ON CSA GATEWAY. THE VOICE LOOPS BELOW WILL BE CONFIGURED FOR DIFFERENT PHASES OF THE MISSION AND SIMULATIONS.

MISSION SUPPORT

NAME	CAP	FROM	TO	RESTRICTION NOTES
1A/G 1	M	JSC	CSA	5
1A/G 2	M	JSC	CSA	5
1S/G 1	M	JSC	CSA	5
1S/G 2	M	JSC	CSA	5
1SCI 1	T/M	MSFC	CSA/JSC	3,6,7
1SCI 2	T/M	MSFC	CSA/JSC	3,6,7
1SCI 3	T/M	MSFC	CSA/JSC	3,6,7
1SCI 4	T/M	MSFC	CSA/JSC	3,6,7
1SCI 5	T/M	MSFC	CSA/JSC	3,6,7
ACO 1	T/M	JSC	CSA	1
ADCO 1	T/M	JSC	CSA	1
ADCO MPSR 1	T/M	JSC	CSA	1
AFD CONF 1	T/M	JSC	CSA	1
AVU COORD	T/M	JSC	CSA	1,2
CATO 1	T/M	JSC	CSA	1
CATO MPSR 1	T/M	JSC	CSA	1
CIO 1	T/M	JSC	CSA	1
COMMAND 2	T/M	JSC	CSA	1
CPO 1	T/M	MSFC	CSA/JSC	3,6
CSA COORD	T/M	JSC	CSA	5
EVA	T/M	JSC	CSA	1
EVA MPSR	T/M	JSC	CSA	1
EVA ISS 1	T/M	JSC	CSA	1
EVA MPSR ISS 1	T/M	JSC	CSA	1
EXPRESS COORD1	T/M	MSFC	CSA/JSC	3,6
FAO	T/M	JSC	CSA	1
FCR SYS 1	T/M	JSC	CSA	1
FD 1	M	JSC	CSA	5
FMT COORD 1	T/M	JSC	CSA	1
GEM AV 1	T/M	JSC	CSA	1

CONTINUED

[PRD] DATABASE RECORD: 556625
ITEM NUMBER: T14HT

HLS CONF 1	T/M	JSC	CSA	3,6
HLS PLNG 1	T/M	JSC	CSA	3,6
INCO 1	T/M	JSC	CSA	1
IP/GC 1	T/M	JSC	CSA	4
ISS AFD 1	T/M	JSC	CSA	1
ISS CAPCOM 1	T/M	JSC	CSA	1
ISS COMMAND 1	T/M	JSC	CSA	1
ISS EVR 1	T/M	JSC	CSA	1,2,4
ISS FD 1	T/M	JSC	CSA	1
ISS MER MGR 1	T/M	JSC	CSA	1,2
ISS MER PROB	T/M	JSC	CSA	1,3
ISS OPS	M	JSC	CSA	5
ISS SAFETY CRD	T/M	JSC	CSA	1,2,3
ISS SPAN	T/M	JSC	CSA	1
ISS SYS COORD3	T/M	JSC	CSA	1
LIS COORD 1	T/M	MSFC	CSA/JSC	3,6
MOCR GNC/PROP1	T/M	JSC	CSA	1
MOCR SPEC 1	T/M	JSC	CSA	1
MOCR SYS 1	T/M	JSC	CSA	1
OC 1	T/M	MSFC	CSA/JSC	3,6
OCA BFCR	M	JSC	CSA	5
OCA RFCR	M	JSC	CSA	5
ODIN 1	T/M	JSC	CSA	1
OPS PLAN 1	T/M	JSC	CSA	1
OPS PLAN SUPT1	T/M	JSC	CSA	1
ORT COORD	T/M	JSC	CSA	1
OSO 1	T/M	JSC	CSA	1
OSO MPSR 1	T/M	JSC	CSA	1
OSVS COORD	T/M	JSC	CSA	1
PAYLOAD CONF 1	T/M	JSC	CSA	3,6
PHALCON 1	T/M	JSC	CSA	1
PHANTOM 1	T/M	MSFC	CSA/JSC	3,6
PL DATA 1	T/M	MSFC	CSA/JSC	3,6
PL SCI 1	T/M	JSC	CSA	3,6
PLANING COORD1	T/M	MSFC	CSA/JSC	3,6
POD 1	T/M	MSFC	CSA/JSC	3,6
PODF SUPPORT 1	T/M	MSFC	CSA/JSC	3,6
POIC STOWAGE 1	T/M	MSFC	CSA/JSC	3,6
PRIME OPS 1	T/M	JSC	CSA	3,6

CONTINUED

[PRD] DATABASE RECORD: 556625
ITEM NUMBER: T14HT

PRO CONF 1	T/M		JSC	CSA	3,6
PSE 1	T/M		MSFC	CSA/JSC	3,6
RINT 1	T/M		JSC	CSA	1
RIO MOCR 1	T/M		JSC	CSA	1
RMS COORD 1	T/M		JSC	CSA	1
ROBO 1	T/M		JSC	CSA	1,2
ROBO COORD 1	T/M		JSC	CSA	1,2
ROBO SYS 1	T/M		JSC	CSA	1,2
RPI OPS	T/M		JSC	CSA	3,6
RS ISS VHF 1	M	MH21	JSC	CSA	5
RS ISS VHF 2	M	MH24	JSC	CSA	5
SOC 1	T/M		MSFC	CSA/JSC	3,6
SVF COORD 1	T/M		JSC	CSA	1
SYS COORD 1	T/M		JSC	CSA	1
THOR 1	T/M		JSC	CSA	1
TRANS RUS TO ENG	M		JSC	CSA	5
VV DYN	T/M		JSC	CSA	1
SIMMULATION LOOPS					
2 S/G 1	M		JSC	CSA	5
2 S/G 2	M		JSC	CSA	5
2 SCI 1	T/M		MSFC	CSA/JSC	3,6,7
2 SCI 2	T/M		MSFC	CSA/JSC	3,6,7
2 SCI 3	T/M		MSFC	CSA/JSC	3,6,7
2 SCI 4	T/M		MSFC	CSA/JSC	3,6,7
2 SCI 5	T/M		MSFC	CSA/JSC	3,6,7
ACO 2	T/M		JSC	CSA	1
ADCO 2	T/M		JSC	CSA	1
ADCO MSPR 2	T/M		JSC	CSA	1
CATO 2	T/M		JSC	CSA	1
CATO MSPR 2	T/M		JSC	CSA	1
CIO 2	T/M		JSC	CSA	1
EVA ISS 2	T/M		JSC	CSA	1
EVA MPSR ISS 2	T/M		JSC	CSA	1
FCR SYS 2	T/M		JSC	CSA	1
FMT COORD 2	T/M		JSC	CSA	1
IP/GC 2	T/M		JSC	CSA	4

CONTINUED

[PRD] DATABASE RECORD: 556625
ITEM NUMBER: T14HT

ISS AFD 2	T/M	JSC	CSA	1
ISS CAPCOM 2	T/M	JSC	CSA	1
ISS COMMAND 2	T/M	JSC	CSA	1
ISS EVA 2	T/M	JSC	CSA	1,2,4
ISS FD 2	T/M	JSC	CSA	1
ISS MCC COORD2	T/M	JSC	CSA	1,2
ISS SIM DATA	T/M	JSC	CSA	1
LIS COORD 2	T/M	MSFC	CSA/JSC	1
OC 2	T/M	MSFC	CSA/JSC	3,6
ODIN 2	T/M	JSC	CSA	1
OPS PLAN 2	T/M	JSC	CSA	1
OPS PLAN SUPT2	T/M	JSC	CSA	1
OSO 2	T/M	JSC	CSA	1
OSO MPSR 2	T/M	JSC	CSA	1
PHALCON 2	T/M	JSC	CSA	1
PLANING COORD2	T/M	MSFC	CSA/JSC	3,6
POD 2	T/M	MSFC	CSA/JSC	3,6
POIC STOWAGE 2	T/M	MSFC	CSA/JSC	3,6
PRIME OPS 2	T/M	JSC	CSA	3,6
RINT 2	T/M	JSC	CSA	1
RIO MOCR 2	T/M	JSC	CSA	1
RMS COORD 2	T/M	JSC	CSA	1
ROBO 2	T/M	JSC	CSA	1,2
ROBO COORD 2	T/M	JSC	CSA	1,2
ROBO SYS 2	T/M	JSC	CSA	1,2
SIM ISS OPS	M	JSC	CSA	5
SIM ISS SYS COORD 3	T/M	JSC	CSA	1
SIM RS ISS VHF1	M	JSC	CSA	5
SIM RS ISS VHF2	M	JSC	CSA	5
SOC 2	T/M	MSFC	CSA/JSC	3,6
SYS COORD 2	T/M	JSC	CSA	1
THOR 2	T/M	JSC	CSA	1

NOTE: 1. Restricted to Remote MPSR (RMPSR)
2. Restricted to Operation Engineering Center (OEC)
3. Restricted to Payload Telescience Operation Center (PTOC)
4. Restricted to Ground Segment Support (GSS)
5. For all areas

CONTINUED

[PRD] DATABASE RECORD: 556625
ITEM NUMBER: T14HT

6. Does NOT include RMPSR and OEC
7. Will be configured when requested

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 08/29/03

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 08/29/03

[PRD] DATABASE RECORD: 561754 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 11/14/02
INITIAL DATE: 02/12/02
ITEM NUMBER: GHT15G DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:01:45

REQUESTER: GSFC MSFC JSC
TEST CODE: STSALL

ASSOCIATED DOC: FLT-I
TRACKING NO. S02-02-1 S02-11-1

1. DESCRIPTION: NISN COMM COORD

Responsilbe Agency: GSFC

REF	CAP	NOTE	TERMINATION LOCATION
T1	T/M	1	Extend to JSC
H2	T/M	1	Extend to MSFC
G3	T/M	1	Distribute to GSFC NISN internal areas

NOTE 1: Orderwire between JSC OST, GSFC COMM MGR, and MSFC NISN (ENMC) and Russian Services Engineering Group (RSEG)for all NISN related voice data issues.

CONTINUED

[PRD] DATABASE RECORD: 561754
ITEM NUMBER: GHT15G

REF: FLT VOL I: ITEM GHT157G SECTION 2750 DBR 567701

SUPPLIER: GSFC AGENCY: GSFC/450 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 11/22/02

[PRD] DATABASE RECORD: 557096 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 11/14/02
INITIAL DATE: 09/25/00
ITEM NUMBER: GHT15.1T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:02:35

REQUESTER: GSFC MSFC JSC
TEST CODE: ISSALL

ASSOCIATED DOC: FLT-I
TRACKING NO. S009-1 S02-11-1

1. DESCRIPTION: NISN COMM COORD

Responsible Agency: JSC

REF	CAP	NOTE	TERMINATION LOCATION
T1	T/M	1	MCC DISTRIBUTION

NOTE: 1. Orderwire between JSC OST, GSFC COMM MANAGER, and MSFC NISN Service Group for all NISN related voice and data issues.

REF: FLT VOL-I ITEM GHT157.1T SECTION FLS2750 DBR 557526

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 11/14/02

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 561755 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 03/27/02
INITIAL DATE: 02/12/02
ITEM NUMBER: GHT15.2H DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:03:23

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE

ASSOCIATED DOC: FLT-I
TRACKING NO. S02-02-1

1. DESCRIPTION: NISN COMM COORD

Responsible Agency: MSFC

REF	CAP	NOTE	TERMINATION LOCATION
H1	T/M	1	Distribution to MSFC ENMC/RSEG
H2	T/M	2	Distribution to MSFC HOSC

NOTE 1: Orderwire between JSC OST, GSFC COMM MGR, and MSFC NISN (ENMC) and Russian Services Engineering Group (RSEG) for all NISN related voice and data issues.

NOTE 2: Used for NISN voice and data communications issues between GSFC COMM MGR, JSC OST, MSFC IST, and others as required.

REF: FLT VOL-I ITEM GHT157.2H SECTION 2750 DBR 567703

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02

[PRD] DATABASE RECORD: 558532 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/29/04
INITIAL DATE: 02/07/01
ITEM NUMBER: T16T DATE LAST CHANGED: 06/29/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 558532
ITEM NUMBER: T16T

SECTION: 2750 TIME LAST CHANGED: 10:26:40

REQUESTER: JSC
SUBREQUESTER: ASI
TEST CODE: MPLM
TRACKING NO. S01-02-2 S01-04-2 S01-07-2 S03-08-1

1. DESCRIPTION: ASI/MPLM VOICE REQUIREMENTS

TOTAL OF CIRCUITS: 17

SHUTTLE FLIGHT CONFIGURATION:

CH	NAME	CAP	FROM JSC TO	NOTE
1.	ISS FD 1	M	ALTEC	
2.	1 A/G 1	M	ALTEC	
3.	1 A/G 2	M	ALTEC	
4.	ECLS COORD	M	ALTEC	
5.	FD 1	M	ALTEC	
6.	ALTEC COORD	T/M	ALTEC	4
7.	ISS MER MGR 1	T/M	ALTEC	
8.	ISS MER PROB	T/M	ALTEC	
9.	INCO 1	M	ALTEC	2
10.	TCS COORD 1	T/M	ALTEC	
11.	PRIME OPS 1	M	ALTEC	
12.	ODIN COORD 1	T/M	ALTEC	
13.	OSO COORD 1	T/M	ALTEC	
14.	AFD CONF 1	M	ALTEC	1
15.	EGIL 1	M	ALTEC	3
16.	STAR 1	T/M	ALTEC	
17.	IMC COORD 1	T/M	ALTEC	

NOTE: 1. During Station support change "AFD CONF 1 (M)" to ISS AFD 1 (M) on MER Manager request.
2. During Station support change "INCO 1 (M)" to "1 S/G 2 (M)" on MER Manager request.
3. During Station support change "EGIL 1 (M)" to "PHALCON COORD (T/M) on MER Manager request.
4. During Pre-Launch, from L-5 hrs up to L+1 hour, this channel

CONTINUED

[PRD] DATABASE RECORD: 558532
ITEM NUMBER: T16T

is configured with the KSC OIS 264 for KSC/JSC/ALTEC coordination.

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/29/04

[PRD] DATABASE RECORD: 558566 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/04
INITIAL DATE: 02/12/01
ITEM NUMBER: T17T DATE LAST CHANGED: 06/23/04
SECTION: 2750 TIME LAST CHANGED: 14:08:44

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S01-02-2 S04-06-2

1. DESCRIPTION: RS ISS VHF 1

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO GSFC	
T2	T/M	EXTEND TO MSFC	1

NOTE: 1. MSFC will stay in monitor mode until the ISS FD request for the loop to be configured in talk mode.

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/23/04

[PRD] DATABASE RECORD: 575468 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/06/04
INITIAL DATE:
ITEM NUMBER: TY17.1G DATE LAST CHANGED: 04/29/04
SECTION: 2750 TIME LAST CHANGED: 10:59:32

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575468
ITEM NUMBER: TY17.1G

REQUESTER: JSC NASA HQ
TEST CODE: CORE
TRACKING NO. S04-04-1

1. DESCRIPTION: RS ISS VHF 1

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO DFRC	
T2	T/M	EXTEND TO WLP	
T3	T/M	EXTEND TO WSC	
Y4	M	EXTEND TO HQ	1

NOTE: Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/29/04

[PRD] DATABASE RECORD: 575469 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T17.2X DATE LAST CHANGED: 04/06/04
SECTION: 2750 TIME LAST CHANGED: 14:25:13

REQUESTER: JSC
TEST CODE: CORE

1. DESCRIPTION: RS ISS VHF 1

RESPONSIBLE AGENCY: DFRC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	DFRC COMM	

SUPPLIER: DFRC AGENCY: DFRC/OS (DRYDEN FLIGHT RESEARCH CENTER)

CONTINUED

[PRD] DATABASE RECORD: 575469
ITEM NUMBER: T17.2X

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 576782 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/04
INITIAL DATE: 06/22/04
ITEM NUMBER: T17.3H DATE LAST CHANGED: 06/23/04
SECTION: 2750 TIME LAST CHANGED: 14:00:45

REQUESTER: JSC
TEST CODE: CORE ISSALL
TRACKING NO. S04-06-2

1. DESCRIPTION: RS ISS VHF 1

RESPONSIBLE AGENCY: MSFC

REF	CAP	TERMATION LOCATION	NOTE
T1	T/M	EXTEND TO POIC	1

NOTE: 1. MSFC will be configured in monitor until the ISS FD request talk capability on the loop.

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 06/23/04

[PRD] DATABASE RECORD: 575470 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T18T DATE LAST CHANGED: 04/06/04
SECTION: 2750 TIME LAST CHANGED: 14:25:31

REQUESTER: JSC
TEST CODE: CORE

1. DESCRIPTION: RS ISS VHF 2

RESPONSIBLE AGENCY: JSC

CONTINUED

[PRD] DATABASE RECORD: 575470
ITEM NUMBER: T18T

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO GSFC	1

NOTE: 1. Downlink receive capability on Soyuz VHF 2. The uplink capability on VHF 2 is for emergency only.

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575471 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T18.1G DATE LAST CHANGED: 04/06/04
SECTION: 2750 TIME LAST CHANGED: 14:25:55

REQUESTER: JSC
TEST CODE: CORE

1. DESCRIPTION: RS ISS VHF 2

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINAITON LOCATION	NOTE
T1	T/M	EXTEND TO DFRC	1
T2	T/M	EXTEND TO WLP	1
T3	T/M	EXTEND TO WSC	1

NOTE: 1. Downlink receive capability on Soyuz VHF 2. The uplink capability on VHF 2 is for emergency only.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/26/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 575472 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T18.2X DATE LAST CHANGED: 04/06/04
SECTION: 2750 TIME LAST CHANGED: 14:26:09

REQUESTER: JSC
TEST CODE: CORE

1. DESCRIPTION: RS ISS VHF 2

RESPONSIBLE AGENCY: DFRC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	DRFC COMM	1

NOTE: 1. Downlink receive capability on Soyuz VHF 2. The uplink capability on VHF 2 is for emergency only.

SUPPLIER: DFRC AGENCY: DFRC/OS (DRYDEN FLIGHT RESEARCH CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575473 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T19T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 16:59:08

REQUESTER: JSC
TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS SITE COORD

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO GSFC	1

NOTE: 1. ISS CITE COORD is for VHF 1 & 2 support only.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575473
ITEM NUMBER: T19T

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 575474 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/24/04
INITIAL DATE: 06/23/04
ITEM NUMBER: T19.1G DATE LAST CHANGED: 06/23/04
SECTION: 2750 TIME LAST CHANGED: 13:57:52

REQUESTER: JSC
TEST CODE: CORE FULL-TIME
TRACKING NO. S04-06-02

1. DESCRIPTION: ISS SITE COORD

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO DRFC	1
T2	T/M	EXTEND TO WLP	1
T3	T/M	EXTEND TO WSC	1
T4	T/M	EXTEND TO MSFC	2

NOTE: 1. ISS SITE COORD is for VHF 1 & 2 support only.
2. ISS SITE COORD is for VHF 1 support only.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 06/24/04

[PRD] DATABASE RECORD: 575475 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/17/04
INITIAL DATE:
ITEM NUMBER: T19.2X DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:45:31

REQUESTER: JSC

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 575475
ITEM NUMBER: T19.2X

TEST CODE: CORE FULL-TIME

1. DESCRIPTION: ISS SITE COORD

RESPONSIBLE AGENCY: DFRC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO DFRC COMM	1

NOTE: 1. ISS SITE COORD is for VHF 1 & 2 support only.

SUPPLIER: DFRC AGENCY: DFRC/OS (DRYDEN FLIGHT RESEARCH CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 02/17/04

[PRD] DATABASE RECORD: 576783 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/23/04
INITIAL DATE: 06/22/04
ITEM NUMBER: T19.3H DATE LAST CHANGED: 06/23/04
SECTION: 2750 TIME LAST CHANGED: 14:05:12

REQUESTER: JSC
TEST CODE: CORE ISSALL
TRACKING NO. S04-06-2

1. DESCRIPTION: ISS SITE COORD

REPONSIBLE AGENCY: MSFC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO IST	ONLY

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 06/23/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 558569 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/10/02
INITIAL DATE: 02/16/01
ITEM NUMBER: T20T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:49:26

REQUESTER: JSC
SUBREQUESTER: ESR
TEST CODE: CORE
TRACKING NO. S01-02-2

1. DESCRIPTION: VOICE REQUIREMENT FOR ESA

NAME	CAP		FROM	TO	NOTE
A/G 1	ESA-01	M	JSC	ESA	
S/G 1	ESA-02	M	JSC	ESA	
Planning Coord 1	ESA-03	M	JSC	ESA	
ISS FD 1	ESA-04	M	JSC	ESA	
ISS AFD 1	ESA-05	M	JSC	ESA	
ISS Surgeon 1	ESA-06	T/M	JSC	ESA	
ISS MED OPS 1	ESA-07	T/M	JSC	ESA	
IP/GC 1	ESA-08	T/M	JSC	ESA	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/10/02

[PRD] DATABASE RECORD: 558796 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/11/02
INITIAL DATE: 03/29/01
ITEM NUMBER: GHT21G DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:48:30

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE

ASSOCIATED DOC: FLT-I
TRACKING NO. S01-03-1 S02-02-1

1. DESCRIPTION: WSC PLAYBACK COORD

CONTINUED

[PRD] DATABASE RECORD: 558796
ITEM NUMBER: GHT21G

Responsible Agency: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO JSC	1
H2	T/M	EXTEND TO MSFC	1
G3	T/M	EXTEND TO WSC	1

NOTE 1: This circuit will be used for all Shuttle and Station Playbacks.

REF: FLT VOL-I ITEM GHT158G SECTION 2750 DBR 558795

SUPPLIER: GSFC AGENCY: GSFC/450 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 10/03/02

[PRD] DATABASE RECORD: 561724 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/11/02
INITIAL DATE: 02/11/02
ITEM NUMBER: GHT21.1T DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:50:57

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE

ASSOCIATED DOC: FLT-I
TRACKING NO. S02-02-1

1. DESCRIPTION: WSC PLAYBACK COORD

Responsible Agency: JSC

REF:	CAP	TERMINATION LOCATION	NOTE

CONTINUED

[PRD] DATABASE RECORD: 561724
ITEM NUMBER: GHT21.1T

T1	T/M	Telcom consoles	1

NOTE 1: This circuit will be used for all Shuttle and Station Playbacks.

REF: FLT VOL-I ITEM GHT13.1T SECTION 2750 DBR 567706

SUPPLIER: JSC AGENCY: JSC/DB (T - JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/11/02

[PRD] DATABASE RECORD: 561725 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/02/02
INITIAL DATE: 02/11/02
ITEM NUMBER: GHT21.2H DATE LAST CHANGED: 02/17/04
SECTION: 2750 TIME LAST CHANGED: 14:52:08

REQUESTER: GSFC MSFC JSC
TEST CODE: CORE

ASSOCIATED DOC: FLT-I
TRACKING NO. S02-02-1

1. DESCRIPTION: WSC PLAYBACK COORD

Responsible Agency: MSFC

REF:	CAP	TERMINATION LOCATION	NOTE
H1	T/M	MSFC local distribution	1

NOTE 1: This circuit will be used for all Shuttle and Station Playbacks.

REF: FLT VOL-I ITEM GHT13.2H SECTION 2750 DBR 567707

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

CONTINUED

[PRD] DATABASE RECORD: 561725
ITEM NUMBER: GHT21.2H

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02

[PRD] DATABASE RECORD: 576237 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/06/04
INITIAL DATE:
ITEM NUMBER: Y22T DATE LAST CHANGED: 04/07/04
SECTION: 2750 TIME LAST CHANGED: 10:50:49

REQUESTER: NASA HQ
TEST CODE: CORE
TRACKING NO. S04-04-1

1. DESCRIPTION: 1 S/G 1

RESPONSIBLE AGENCY: JSC

REF	CAP	TERINATION LOCATION	NOTE
Y1	M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/07/04

[PRD] DATABASE RECORD: 576238 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/06/04
INITIAL DATE:
ITEM NUMBER: Y22.1G DATE LAST CHANGED: 04/29/04
SECTION: 2750 TIME LAST CHANGED: 10:59:53

REQUESTER: NASA HQ
TEST CODE: CORE
TRACKING NO. S04-04-1

1. DESCRIPTION: 1 S/G 1

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE

CONTINUED

[PRD] DATABASE RECORD: 576238
ITEM NUMBER: Y22.1G

Y1	M	EXTEND TO HQ	1

NOTE: Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/29/04

[PRD] DATABASE RECORD: 576239
DOCUMENT ID: ISS VOL-I
ITEM NUMBER: Y23T
SECTION: 2750
REQUIREMENT STATUS: APPROVED R
APPROVAL DATE: 04/06/04
INITIAL DATE:
DATE LAST CHANGED: 04/07/04
TIME LAST CHANGED: 10:51:12

REQUESTER: NASA HQ
TEST CODE: CORE
TRACKING NO. S04-04-1

1. DESCRIPTION: 1 S/G 2

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/07/04

[PRD] DATABASE RECORD: 576240
DOCUMENT ID: ISS VOL-I
ITEM NUMBER: Y23.1G
SECTION: 2750
REQUIREMENT STATUS: APPROVED R
APPROVAL DATE: 04/06/04
INITIAL DATE:
DATE LAST CHANGED: 04/29/04
TIME LAST CHANGED: 11:00:16

REQUESTER: NASA HQ
TEST CODE: CORE

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 576240
ITEM NUMBER: Y23.1G

TRACKING NO. S04-04-1

1. DESCRIPTION: 1 S/G 2

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	M	EXTEND TO HQ	1

NOTE: Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/29/04

[PRD] DATABASE RECORD: 576241 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/06/04
INITIAL DATE:
ITEM NUMBER: Y24T DATE LAST CHANGED: 04/07/04
SECTION: 2750 TIME LAST CHANGED: 10:51:37

REQUESTER: NASA HQ
TEST CODE: CORE
TRACKING NO. S04-04-1

1. DESCRIPTION: TRANSLATE RUSSIAN TO ENGLISH

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
Y1	M	EXTEND TO GSFC	

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/07/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 576242 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 04/06/04
INITIAL DATE:
ITEM NUMBER: Y24.1G DATE LAST CHANGED: 04/29/04
SECTION: 2750 TIME LAST CHANGED: 11:00:38

REQUESTER: NASA HQ
TEST CODE: CORE
TRACKING NO. S04-04-1

1. DESCRIPTION: TRANSLATE RUSSIAN TO ENGLISH

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINAITON LOCATION	NOTE
Y1	M	EXTEND TO HQ	1

NOTE: Voice loop will be extended to the Action Center for the ISS staff.

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 04/29/04

[PRD] DATABASE RECORD: 576515 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/09/04
INITIAL DATE:
ITEM NUMBER: T25T DATE LAST CHANGED: 06/09/04
SECTION: 2750 TIME LAST CHANGED: 11:12:03

REQUESTER: JSC
TEST CODE: CORE ISSALL
TRACKING NO. S04-05-2 S04-05-2A S04-06-1 S04-06-1A

1. DESCRIPTION: IP/GC 1

RESPONSIBLE AGENCY: JSC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO GSFC	1

CONTINUED

[PRD] DATABASE RECORD: 576515
ITEM NUMBER: T25T

NOTE: 1. GSFC will be configured in monitor mode until the ISS/GC request the loop to be in talk mode.

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/09/04

[PRD] DATABASE RECORD: 576516 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/09/04
INITIAL DATE:
ITEM NUMBER: T25.1G DATE LAST CHANGED: 06/09/04
SECTION: 2750 TIME LAST CHANGED: 11:13:20

REQUESTER: JSC
TEST CODE: CORE ISSALL
TRACKING NO. S04-05-2 S04-05-2A S04-06-1 S04-06-1A

1. DESCRIPTION: IP/GC 1

RESPONSIBLE AGENCY: GSFC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO WSC	
T2	T/M	EXTEND TO WPS	
T3	T/M	EXTEND TO DFRC	

SUPPLIER: GSFC AGENCY: GSFC/451 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: NOACK RESPONSE DATE: 06/09/04

[PRD] DATABASE RECORD: 576535 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 06/09/04
INITIAL DATE:
ITEM NUMBER: T25.2X DATE LAST CHANGED: 06/10/04
SECTION: 2750 TIME LAST CHANGED: 11:32:07

REQUESTER: JSC
TEST CODE: CORE ISSALL
TRACKING NO. S04-05-2A S04-06-1A

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2750 - VOICE TERMINATIONS

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 576535
ITEM NUMBER: T25.2X

1. DESCRIPTION: IP/GC 1

RESPONSIBLE AGENCY: DFRC

REF	CAP	TERMINATION LOCATION	NOTE
T1	T/M	EXTEND TO THE COMM AREA	

SUPPLIER: DFRC AGENCY: DFRC/OS (DRYDEN FLIGHT RESEARCH CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 06/09/04

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 2800 - VIDEO

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 533563 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/08/02
INITIAL DATE: 08/23/96
ITEM NUMBER: T1GT DATE LAST CHANGED: 12/11/02
SECTION: 2800 TIME LAST CHANGED: 15:45:48

REQUESTER: JSC
TEST CODE: FLT 1A
TRACKING NO. S02-02-1 S609-1 S610-2 S804-1 S905-1

1. DESCRIPTION: TELEVISION

The ISS operational television is multiplexed into the Ku-band aggregate return link and is transmitted to the SSCC as digital data. Up to four channels may be simultaneously transmitted. The SSCC will convert the digital data to standard National Television Standards Committee (NTSC) signals and corresponding analog voice. JSC will make these television and voice signal available at the JSC located NASA Operational WAN I/F for distribution.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/08/02

[PRD] DATABASE RECORD: 553803 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 01/31/03
INITIAL DATE: 11/09/99
ITEM NUMBER: TH2GHT DATE LAST CHANGED: 02/28/03
SECTION: 2800 TIME LAST CHANGED: 15:24:35

REQUESTER: JSC MSFC
TEST CODE: CORE
TRACKING NO. S008-1 S01-02-2 S02-02-1 S03-01-1 S911-1

1. DESCRIPTION: TELEVISION COMMUNICATIONS REQUIREMENTS

NISN is to provide two (2) video channels to the HOSC Annex, CSA Peering Point, GRC TSC, and to the RPI Peering Point. NISN is to encode NTSC video sourced from JSC Building 8, up to 6Mbs per channel. JSC ISD is responsible for delivering NTSC video from JSC Building 8 to the JSC NISN PIP demarcation point. Service restoration for ISD

CONTINUED

[PRD] DATABASE RECORD: 553803
ITEM NUMBER: TH2GHT

resources is less than 8 hours on the weekdays and on-call on weekends. A NISN PIP service is required to the HOSC and GRC TSC. A NISN SIP service is required to the RPI Peering Point and CSA. CSA and the RPI sites are responsible for the delivery of encoded video from the Peering Point to their facilities. NISN will provide decoding equipment at the HOSC, GRC TSC, and CSA to deliver NTSC outputs. The RPI sites require the video to be delivered in IP format for viewing on a PC. The ISS Orbital PRD Volume II identifies the RPI sites authorized to receive ISS video.

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/28/03

SUPPLIER: MSFC AGENCY: MSFC/FD43 (MARSHALL SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/11/03

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 01/31/03

[PRD] DATABASE RECORD: 551507 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/11/02
INITIAL DATE: 05/05/99
ITEM NUMBER: T3GT DATE LAST CHANGED: 01/31/03
SECTION: 2800 TIME LAST CHANGED: 14:33:11

REQUESTER: JSC
TEST CODE: CORE FLT 1A
TRACKING NO. S02-02-1 S905-1

1. DESCRIPTION: MCC-M TO MCC-H VIDEO

NISN shall provide one simplex broadcast quality TV circuit from MCC-M to MCC-H for simulation, Soyuz launch, and real-time support as scheduled for PAO events.

OND: FLT 1A -6 MONTHS

CONTINUED

[PRD] DATABASE RECORD: 551507
ITEM NUMBER: T3GT

SUPPLIER: GSFC AGENCY: GSFC/450.3 (G - GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/27/02
RESPONSE:

SUPPLIER: JSC AGENCY: JSC/DV (JOHNSON SPACE CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 02/11/02

[PRD] DATABASE RECORD: 561705 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 02/11/02
INITIAL DATE: 02/11/02
ITEM NUMBER: T5G DATE LAST CHANGED: 07/03/02
SECTION: 2800 TIME LAST CHANGED: 08:10:59

REQUESTER: JSC
TEST CODE: CORE
TRACKING NO. S02-02-1

1. DESCRIPTION: LOW BANDWIDTH VIDEO BEWTEEN MCC-M AND MCC-H

Use of the administrative video conferencing system will be scheduled to support Soyuz and Progress dockings, and other selected scheduled events.

NOTE: Use of this video is desirable but not critical to operations. Availability and reliability of this bandwidth is not guaranteed for mission operations because it is administrative bandwidth.

SUPPLIER: GSFC AGENCY: GSFC/450 (GODDARD SPACE FLIGHT CENTER)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 03/14/02

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 3410 - OTHER TECHNICAL SUPPORT - AIRCRAFT

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

[PRD] DATABASE RECORD: 557473 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 10/30/00
INITIAL DATE: 10/30/00
ITEM NUMBER: T1D DATE LAST CHANGED: 12/11/02
SECTION: 3410 TIME LAST CHANGED: 15:51:28

REQUESTER: JSC
SUBREQUESTER: JSC/SD2
TEST CODE: CORE ISS LANDNG
TRACKING NO. S010-2

1. DESCRIPTION: SOYUZ MEDEVAC REQUIREMENT

Provide backup MEDEVAC services, as required, for U.S. ISS Astronauts following a Soyuz contingency or nominal landing in Russia. A dedicated aircraft is not required for this service.

MEDEVAC will follow recovery by Russian personnel and will be from Moscow or the closest available airport to the contingency landing site as coordinated by NASA, the State Department, and the American Embassy, MEDEVAC should include nurse(s) and medical technician (s) that normally accompany the DOD MEDEVAC aircraft. A NASA/Contractor flight surgeon will accompany the Astronaut.

NASA desires to keep the Astronaut in the DOD medical system, and will be requesting transport to Ramstein AB, Germany for transfer to Landstuhl Hospital.

Coordination: JSC/SD2/Wyle/M. Chandler/281 212-1358

SUPPLIER: DDMS AGENCY: DDMS/X (DEPARTMENT OF DEFENSE)

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 11/27/00
RESPONSE: NASA will be responsible for reimbursement of any and all MEDEVAC costs.

[PRD] DATABASE RECORD: 557474 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 10/30/00
INITIAL DATE: 10/30/00
ITEM NUMBER: T2D DATE LAST CHANGED: 12/11/02

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 3410 - OTHER TECHNICAL SUPPORT - AIRCRAFT

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 557474
ITEM NUMBER: T2D

SECTION: 3410 TIME LAST CHANGED: 16:00:17

REQUESTER: JSC
SUBREQUESTER: JSC/SD2
TEST CODE: CORE ISS
TRACKING NO. S010-2

1. DESCRIPTION: MEDEVAC OF ASTRONAUTS IN TRAINING OR THEIR FAMILIES

Provide secondary MEDEVAC services, as required, for U.S. Astronauts and their families following a contingency in Russia. A dedicated aircraft is not required for this service.

Following a contingency is Russia involving either U.S. Astronauts in training or their respective families, an agreement has been made with AEA-SOS Moscow to provide the primary MEDEVAC. In the event that this MEDEVAC capability is not available, a secondary source is required.

If needed, DOD MEDEVAC will transport the ill or injured persons to a hospital designated by the on-scene NASA/Contractor flight surgeon. MEDEVAC should include nurse(s) and medical technician(s) that normally accompany the DOD MEDEVAC aircraft. In the event that the mishap involves a U.S. Astronaut, the NASA/Contractor flight surgeon will accompany the Astronaut.

Coordination: JSC/SD2/Wyle/M. Chandler/281 212-1358

SUPPLIER: DDMS AGENCY: DDMS/X (DEPARTMENT OF DEFENSE)

SUPPLIER COMMITMENT: WILCO SEE RESPONSE RESPONSE DATE: 11/27/00
RESPONSE: NASA will be responsible for reimbursement of any and all MEDEVAC costs. DoD MEDEVAC will only be used when priority or urgent medical care is required, not routine medical care. DoD MEDEVAC will only be provided for U.S. citizens.

INTERNATIONAL SPACE STATION ORBITAL VOL-I
PROGRAM REQUIREMENTS DOCUMENT/PROGRAM SUPPORT PLAN/
OPERATIONS REQUIREMENT/OPERATIONS DIRECTIVE (PRD/PSP/OR/OD)
PROGRAM NUMBER: 30000

SECTION 3410 - OTHER TECHNICAL SUPPORT - AIRCRAFT

PUBLICATION DATE: 05/31/96 REVISION: 0000 RUN DATE: 06/30/04

CONTINUED

[PRD] DATABASE RECORD: 557474
ITEM NUMBER: T2D

[PRD] DATABASE RECORD: 557475 REQUIREMENT STATUS: APPROVED R
DOCUMENT ID: ISS VOL-I APPROVAL DATE: 10/30/00
INITIAL DATE: 10/30/00
ITEM NUMBER: T3D DATE LAST CHANGED: 07/03/02
SECTION: 3410 TIME LAST CHANGED: 08:10:56

REQUESTER: JSC
SUBREQUESTER: JSC/SD2
TEST CODE: CORE ISS
TRACKING NO. S010-2

1. DESCRIPTION: COORDINATION OF CLEARANCE FOR SOS INTERNATIONAL (MEDEVAC) TO LAND AT RAMSTEIN AB, GERMANY

Provide primary point-of-contact and coordination of DOD clearance for SOS International (Commercial MEDEVAC) to land at Ramstein AB, Germany for patient transfer to Landstul Hospital.

Coordination: JSC/SD2/Wyle/M. Chandler/281 212-1358

SUPPLIER: DDMS AGENCY: DDMS/X (DEPARTMENT OF DEFENSE)

SUPPLIER COMMITMENT: WILCO RESPONSE DATE: 11/27/00

THIS REPORT CONTAINS 120 PAGES

REPORT BY: FORM=06 DOC=ISS VOL-I APV= APP P1030=N